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ABSTRACT

This marketing unit was developed to help farm families formulate a step-by-step plan for marketing their commodities in order to help remove much of the guesswork and anxiety from the process. The unit is organized in the following eight sections: introduction; sources of risk; pricing alternatives; developing a plan (10 steps); summary; suggested references on marketing; and two exercises, with work sheets, on developing a marketing plan to fit individual needs. A teacher's guide includes objectives, a teaching outline, suggested on- and off-farm learning activities, interest approaches, discussion guides, and answers to exercises. Twenty-eight transparency masters are included. (KC)

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PLAN YOUR MARKETING: ENHANCE PROFITS AND REDUCE RISK

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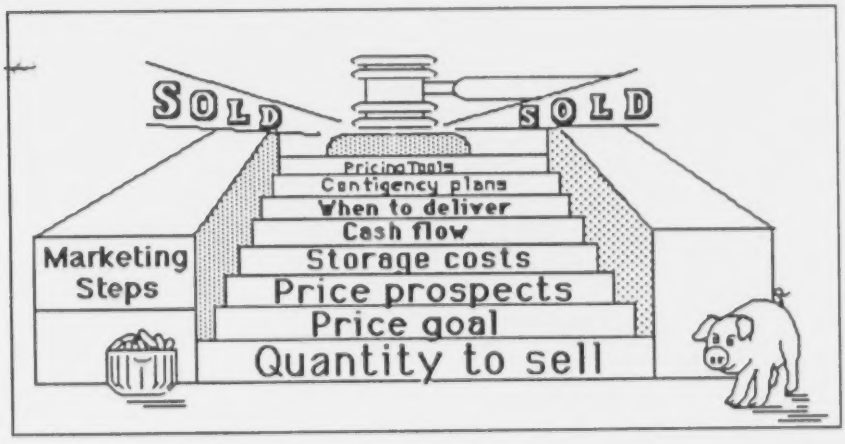
PLAN YOUR MARKETING:
ENHANCE PROFITS AND REDUCE RISK

OBJECTIVES

Upon completion of this unit each farm family will:

1. estimate the quantities of livestock or crops available to be marketed;
2. set price goals considering breakeven costs, storage costs, and price outlook;
3. project delivery periods considering cash flow needs;
4. compare alternative pricing tools according to net prices and riskiness;
5. assess the market risk bearing ability of the farm based on solvency and liquidity positions; and
6. complete their own market plan.



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Plan Your Marketing: Enhance Profits and Reduce Risks

I. Introduction

II. Sources of Risk

III. Financial Management

IV. Pricing Alternatives

V. Developing a Plan
- Step 1. Quantity to Sell
- Step 2. Price Goal
- Step 3. Price Prospects
- Step 4. Storage Costs
- Step 5. Cash Flow
- Step 6. When to Deliver
- Step 7. Contingency Plans
- Step 8. Pricing Tools
- Step 9. Price Variability
- Step 10. Risk-bearing Ability

VI. Summary

VII. Suggested References on Marketing

VIII. Exercises
- Case Study for Market Plan
- Your Marketing Plan

PLAN YOUR MARKETING: ENHANCE PROFITS AND REDUCE RISK

I. INTRODUCTION

For most farm families, deciding when and how to market their crops and livestock is a frustrating activity.

They feel that prices are determined by forces and actions over which they have no control. Or that price predictions are never accurate, or that keeping tabs on the markets requires too much time and information. And someone else always gets a better price, anyway.

Is it any wonder that the majority of farm families simply sell their grain or livestock for cash when they are ready for market, or when funds are needed? There are other marketing opportunities that are open to those who are willing to investigate them, however. Moreover, formulating a step-by-step plan for marketing commodities will help remove much of the guesswork and anxiety from the process.

II. SOURCES OF RISK

The **volatility of cash commodity markets** is the major source of marketing risk. All the factors that affect short run supply and demand, as well as anticipated changes in these factors, cause daily or even hourly fluctuations in cash prices.

Futures markets are affected by the same factors as cash markets, as well as by differences in transportation costs and carrying charges over time. For the producer who sells futures contracts as a temporary substitute for selling the actual commodity, the changes in the difference between the cash and futures prices, or **basis**, also present a source of market risk, but at a much lower level than cash prices.

When commodities are priced before they are ready to be delivered, uncertainty over yield prospects, storage losses and death losses create **production risks** in marketing decisions.

III. FINANCIAL MANAGEMENT

Marketing decisions are often made jointly with decisions about financial management. The amount of risk that can be safely assumed by a farming operation depends to a large extent on its **solvency** position, that is, how much debt must be serviced compared to the size of the business. Employing risky marketing strategies can impair the ability of a business to service its debt, or to secure additional financing.

Liquidity, or short-term cash flow needs, may also influence when products are marketed. If major debt payments or other expenses are due and the product price has not been established earlier, sales may have to be made immediately even though prospects are good for higher prices later. Income tax management decisions can also affect the timing of sales, especially near the end of the tax year. Fortunately tools are available to establish prices earlier while shifting income into the next tax year. This reduces or removes the risk of a decline in prices while a commodity is being stored.

When it appears wise to delay selling, other sources of cash such as savings or credit may need to be utilized temporarily. Then, marketing and cash flow strategies must be considered simultaneously. Moreover, some pricing alternatives such as futures and options markets require cash to be placed in temporary margin accounts or paid out for premiums. For all these reasons, the financial position of the farm has a heavy influence on the timing of marketing actions and the choice of tools that are employed.

IV. PRICING ALTERNATIVES

Five basic pricing tools are available for agricultural commodities, although many combinations and variations of these exist. The characteristics of four of these tools are summarized in Table 1.

Table 1. A Comparison of Pricing Alternatives

	Sell Cash	Forward Contract	Hedge	Options (buy put)
Control over:				
- production risk	no	no	no	no
- cash price risk, preharvest	no	some	some	some
postharvest	no	yes	yes	yes
- basis risk	yes	yes	no	no
Cash flow implications:				
- cash received	delivery	delivery	delivery	delivery
- broker fees	no	no	yes	yes
- margin account	no	no	yes	yes
- other costs	no	no	no	premium
Information needed:	cash prices	contract price, expected quantity	futures prices, expected quantity, basis	futures prices, expected quantity, basis, premiums
Quantity restrictions:	no	no	yes	yes
Reversible:	no	no	yes	yes

Pricing on the CASH MARKET can be done only after grain is harvested, or when livestock have reached market weight. The producer is fully exposed to the risk of price changes until then. Any quantity can be priced, and a minimal amount of market information is needed.

A FORWARD CONTRACT signed after harvest or as livestock approach marketable weight eliminates risk from subsequent changes in either cash or futures prices. Forward contracting prior to harvest or in the early stages of livestock production leaves the producer vulnerable to the risk of price changes for any excess or deficit production compared to the contracted amount, however.

PRICE-LATER CONTRACTS allow producers to physically market their products, thus stopping storage costs, while at the same time retaining the flexibility of establishing the price of their product at a later date. Typically any quantity may be priced with this tool. Although the producer is exposed to the same price risks as in the cash market, there is no risk of quality deterioration, and service charges for these contracts may be less than storage costs. This cannot be used in combination with a Commodity Credit Corporation (CCC) loan, however.

HEDGING by selling futures contracts until the corresponding product can be sold on the cash market substitutes basis risk for cash price risk. Generally, basis will vary much less than the cash price. Preharvest or preproduction hedging still leaves open some risk of production losses, just as in forward contracting. However, hedging decisions can be reversed much more easily and quickly than forward contracts and thus provide some extra flexibility in case of production problems. Futures contracts are traded only in one or two specific contract sizes. Hedging requires knowledge of futures markets, payment of a small fee to brokers, and maintenance of cash reserves in a margin account.

When a producer has hedged a commodity by selling a futures contract and the futures price rises, the broker will require additional funds to be placed in the margin account. The marketer must maintain a cash reserve to meet these requirements, or have an agreement with a short-term lender to provide the funds.

OPTIONS markets offer producers the chance to buy the right to sell a futures contract at a specified strike price, called a "put." If the futures price drops, the value of the put increases and helps offset the loss from the declining market. When the futures price goes above the strike price the value of the put declines and may eventually drop to zero. However, the producer benefits from any increases in cash prices when the actual commodity is sold. Thus, only the undesirable downside price variation is negated. The cost of this protection is the original cost of the put, called the premium, plus a small brokerage fee.

Since the put value varies inversely with the futures price and not the cash price, a producer who eventually offsets the option position by selling the put and then selling the commodity on the cash market is still affected by basis risk.

A producer also can sell a "call," or the obligation to buy a futures contract if prices rise above some specific level or strike price. This action generates cash, but price increases above the call strike price are offset by additional margin deposits and the possibility of having to repurchase the call at a higher price. Purchasing a put and selling a call in combination is called a "fence." Premiums from the sale of call options help offset the cost of purchasing put options, but selling the call limits the producer's potential gains if the market trends upward.

In some cases, the cost of price protection through options trading can be significantly reduced by forward contracting and then buying call options. If prices rise, the call option increases in value. If prices fall, the selling price is protected by the forward contract.

Use of options requires some knowledge of futures markets as well as options trading, and involves the same quantity restrictions. Brokers' fees are required, and the initial premium cost must be paid when the pricing action is taken. Options transactions involving initial purchases of puts or calls avoid margin deposits that are required in futures trading, however. With these tools, farm families can remove much of the down-side price risk, retain up-side price flexibility, and still have a known maximum cost or loss exposure in the options market.

For most commodities several contract months are available for hedging, and options have at least six or seven strike prices available to choose from. In the case of grain, all five major pricing tools can also be combined with storage to create flexibility as to when the commodity is actually delivered.

V. DEVELOPING A PLAN

Before the actual pricing tools are selected, several pieces of information must be gathered and evaluated. Doing this step by step will result in a **marketing plan** that shows approximately when commodities will be sold and how they will be priced. Ideally, a tentative marketing plan is developed before the crop is planted, or livestock are placed on feed.

Step 1. Quantity to Sell

Estimate the quantity that will be available for sale and the earliest possible delivery date. This may involve a considerable amount of uncertainty for unharvested crops. Quantities of grain that will be paid to a landlord under a crop share lease or needed for livestock feed must be subtracted to estimate the amount available for sale. For livestock, similar adjustments for death loss and retained breeding stock must be made.

Step 2. Price Goal

Develop a pricing goal or standard. Total economic costs, including opportunity costs for unpaid labor and equity capital, are useful for judging whether a profit will be earned on the commodity or not, but represent sunk or fixed costs by the time the pricing decision is made.

In the short run, the breakeven cash flow requirement per unit may be a more useful standard for farm families who have a significant amount of debt, because achievement of this breakeven price determines whether or not other sources of funds such as cash reserves or additional borrowing will have to be utilized, and whether current loans and other obligations can be paid as they come due. The cash flow breakeven price includes cash input costs, wages for hired labor, cash rent, family living expenses, taxes, and principal and interest payments.

Step 3. Price Prospects

Examine price prospects over the potential delivery period. Information available may include a projected season average price, near-term price predictions and ranges, supply and demand factors, seasonal price patterns, and historical variations in prices. Table 2 shows typical seasonal price patterns for several commodities.

Table 2. Seasonal Price Indexes

	Quarterly Price as % of Yearly Average			
Normal Crop	Jan-Mar	Apr-Jun	Jul-Sept	Oct-Dec
Corn	97%	104%	105%	93%
Soybeans	98%	104%	106%	92%
Short Crop				
Corn	101%	102%	94%	104%
Soybeans	100%	103%	92%	105%
Livestock				
Market Hogs	100%	97%	105%	97%
Choice Steers	98%	104%	100%	98%
Market Lambs	101%	106%	96%	98%

Step 4. Storage Costs

Estimate the costs of storing crops for future delivery. This allows a fair comparison of pricing opportunities with different delivery dates. Storage costs include rental of storage facilities, extra handling, extra drying and shrinkage, extra quality loss, and interest on deferred income. Interest costs can be reduced by using CCC price-support loans. Loans from the CCC also provide a guaranteed minimum price, although for many producers this price may be below their cash flow breakeven cost.

Farm families who use cash accounting for tax preparation can reduce interest costs by deferring sales until after the tax year's end, thus postponing income tax payments for one year. This reduces the net cost of storage. Storage costs can be calculated separately for each delivery month, and for both owned and rented storage.

Step 5. Cash Flow

Develop a cash flow budget that covers the potential delivery period. Include all potential cash flows except sales of the product to be marketed. Cash inflows should include government program payments. The net cash flow deficits indicate how much revenue must be generated from sales or other sources, and when it is needed.

Step 6. When to Deliver

Divide cash flow needs in each time period by the expected cash price in that time period to estimate the minimum quantity that needs to be delivered by that period. Generally, cash income is not received until the product is delivered, even though pricing may have occurred earlier. For livestock there is little flexibility in delivery time.

For marketers who have substantial operating capital or borrowing capacity, the time of delivery will be dictated more by expectations of price movements, storage costs, and storage needs for a new crop.

Step 7. Contingency Plans

Develop contingency plans that outline what to do in case cash sales fall short of the required revenue, if you experience serious production problems, or if it looks profitable to delay sales. Cash reserves or short-term credit can be used to temporarily meet cash flow needs.

Step 8. Pricing Tools

Evaluate pricing alternatives for a given delivery time. Subtract any storage and transaction costs from the relevant cash or futures prices to obtain a "net price," as shown below:

a) **Cash sale**: cash price available (or expected) minus storage costs until delivery is made.

b) **Price later contract**: cash price expected at delivery minus contract service charges.

c) **Forward contract**: contract price minus storage costs until delivery.

d) **Hedge**: Futures price when hedge is placed, minus the expected basis when the hedge is to be lifted, minus broker and storage costs.

e) **Option**: Strike price when put is purchased, minus purchase cost (premium) of the put, minus the expected basis when the put is sold, minus broker and storage costs. This is the expected minimum price. If the futures price exceeds the strike price, then the net price is simply the cash price minus the premium, broker costs and storage costs. If a "fence" strategy is used, the net price is increased by the value of the call that is sold.

Step 9. Price Variability

Reevaluate the various pricing tools available in regard to the potential range of net prices that might be realized ultimately. Choose tools that provide risk protection consistent with the risk-bearing ability of the business.

When commodity supplies are tight relative to demand, both cash prices and basis tend to be more volatile. Basis is nearly always less variable than cash prices, however. Expected ranges for cash prices and basis are shown in Tables 3 and 4. By incorporating these into the price analysis, the range of potential net prices can be estimated for each pricing tool, as shown in examples above. More information about expected basis can be found in Extension publications M-1243 and M-1249 (hogs), M-1242 and M-1250 (beef cattle), and M-1210 through M-1215 (corn and soybeans), available at county Extension offices.

Table 3. Ranges for Estimated Cash Prices

	Quarterly Price as % of Yearly Average			
Normal Crop	Oct-Dec	Jan-Mar	Apr-June	July-Sept
Corn	87 to 109	89 to 108	93 to 107	78 to 122
Soybeans	77 to 109	90 to 106	90 to 124	87 to 121
Short Crop				
Corn	91 to 109	94 to 106	92 to 108	95 to 105
Soybeans	81 to 119	97 to 103	79 to 121	87 to 113
	Actual Cash Price as % of Projected Price			
Hogs	1Qtr. Ahead	2Qtrs. Ahead	3Qtrs. Ahead	4Qtrs. Ahead
Range	95 to 106	93 to 109	92 to 111	91 to 112

Step 10. Risk-bearing Ability

Analyze the farm's asset and liability position and cash flow needs to assess how much risk can be assumed. A highly leveraged farming operation must utilize strategies and tools that offer a low probability of losses, even if opportunities for high returns are reduced as well.

Several simple ratios can be used to evaluate the degree of risk a farming operation is facing when marketing its commodities.

Table 4. Expected Basis in Month Before Contract Closes

	Corn		Hogs	
Contract Month	Average Basis, $/bu.	Range	Average Basis, $/cwt.	Range
January				
February			0.85	.44 to 2.17
March	.26	.20 to .32		
April			1.73	.38 to 2.80
May	.23	.15 to .31		
June			2.15	.40 to 3.75
July	.20	.07 to .33		
August			-.42	-2.31 to 1.00
September	.17	.00 to .34		
October			.11	-1.73 to 1.84
November				
December	.35	.25 to .45	2.18	.21 to 3.71

A. Net Worth Risk Ratio

Based on leverage, borrowing reserves, and financial commitments, you may decide how large a loss the business can stand in one year. For example, any pricing strategy that offered a significant chance of losing more than 10 percent of the farm's net worth might be rejected.

Dividing the maximum net worth loss that can be risked by the quantity to sell indicates how far below the breakeven selling price the actual net price can be for that level of risk. Compute the net worth risk ratio as follows:

$$\frac{\text{maximum net worth loss to risk,in dollars}}{\text{quantity to sell in bu. or cwt.}}$$

When this ratio is large more risky price strategies can be utilized. Pricing strategies that might result in a larger loss than this should be avoided, however.

B. Cash Flow Risk Ratio

Computing the minimum price needed to meet financial obligations as a percent of the expected average price tells you what percent of the crop must be marketed at that price. Once that is achieved, the remaining production can be marketed using methods intended to gain the highest possible net price, regardless of risk.

Compute the cash flow risk ratio as follows:

$$\frac{\text{cash flow breakeven price}}{\text{expected season average price}}$$

The higher this ratio, the more important it is to lock in a price at or above the breakeven price when it is available, and the less the marketer can afford to speculate on the possibility of achieving a higher price.

A cash flow risk ratio greater than 100 percent means it is likely that savings and/or borrowing will have to be used to meet cash flow needs.

C. Price Protection Ratio

Another key ratio indicates what proportion of the supply of a commodity has already been priced. The price protection ratio is found by:

$$\frac{\text{total units priced by a forward contract, hedge, or option}}{\text{total units yet to be delivered}}$$

For example, a ratio of .40 indicates that 40 percent of the production has a price locked in or at least stabilized through the use of some forward pricing technique. The value of the remaining 60 percent is still vulnerable to changes in the market price.

When this ratio exceeds 1.00 all projected sales have been forward priced and the marketer is now speculating on the value of a futures contract, a commodity option, or, in the case of excess forward contracting, on the cash market. This increases financial risk for the business.

A price protection ratio close to 1.00 is encouraged when (1) the quantity to be sold is known for certain, or production risk is low or protected by insurance, (2) very little price risk can be tolerated, or (3) a decline in prices is highly likely.

VI. SUMMARY

Although these steps will help you decide when to deliver your commodities and what tools to use for pricing them, all plans must be open to revision. In particular, expectations of prices significantly different from those incorporated into the original plan will call for revisions. Crop yields or livestock production rates that are higher or lower than expected will also make it necessary to alter the plan.

Many sources of market information are available that summarize market fundamentals and their implications, as well as predict price movements based on fundamental and technical analysis rules. Such information can be helpful in deciding whether to price now or at a later time. No one can predict prices with 100 percent accuracy, or always sell at the highest price. However, much of the anxiety in marketing can be relieved by understanding the tools that are available, evaluating individual risk-bearing ability, and developing a step-by-step plan.

VII. SUGGESTED REFERENCES ON MARKETING

LIVESTOCK MARKETING

A. Cooperative Extension Service, 112 Printing and Publications, ISU, Ames, Iowa 50011
- Swine Enterprise Record Analysis. As 360
- Beef Feedlot Enterprise Records. As 464
- Beef Cow Business Records. As 428

B. See pages 11-45 and 11-46 Farm and Family Management Notebook

C. Business Management in Agriculture Videotape Series. Media Resources, 121 Pearson, ISU, Ames, Iowa 50011
- A Marketing Strategy for Livestock. # 75666 (38:42 min.)

GRAIN MARKETING

A. Cooperative Extension Service, 112 Printing and Publications, ISU, Ames, Iowa 50011
- Crop Enterprise Record Analysis. Ag 125
- Use of Seasonal Patterns for Corn Price Forecasting. M-1203
- Use of Seasonal Patterns for Soybean Price Forecasting. M-1209
- Using Grain Futures in the Farm Business. Pm-687
- Understanding and Using Grain Options Markets: A Home Study Course.
- How to Trade Options. M-1233a
- Using Options Markets to Insure Minimum Grain Prices. M-1233b
- Grain Options Compared with Other Marketing Tools. M-1233c
- Other Uses of Grain Options Markets. M-1233d
- Iowa Corn and Soybean Basis Patterns
  - Southeast. M-1210
  - South Central. M-1211
  - Southwest. M-1212
  - Northwest. M-1213
  - North Central. M-1214
  - Northeast. M-1215

B. North Central Regional Extension Producer Marketing Management Publication No. 217. 112 Printing and Publications, ISU, Ames, Iowa 50011
- Primer on Agricultural Options. Fact Sheet 1
- Deferred Pricing Alternatives for Grain. Fact Sheet 2
- Using Seasonal Cash Price Patterns for Selling Decisions on Corn, Soybeans, and Wheat. Fact Sheet 3
- Developing Marketing Strategies and Keeping Records on Corn, Soybeans, and Wheat. Fact Sheet 4

C. Business Management in Agriculture Videotape Series. Media Resources, 121 Pearson, ISU, Ames, Iowa 50011
- A Marketing Strategy for Grain. # 75665 (32:55 min.)

D. Chicago Board of Trade Publications. LaSalle at Jackson, Chicago, IL 60604
- Options on Agricultural Futures: A Home Study Course
- Commodity Marketing Producer's Handbook
- Understanding Basis

DEVELOPING A FARM MARKETING PLAN

Objective: The purpose of these exercises is to increase your ability to make grain and livestock marketing decisions concerning the use of cash sales, forward contracts, hedges, and options.

The following worksheets contain information for an example problem. Bob and Barbara Buyer operate a farm and are buying land as well as renting land. Review their situation and information given on these worksheets:

The farm and family situation (page 12-14)

Livestock available to sell (worksheet 1)

Grain available to sell (worksheet 2)

Farrow-to-finish production costs and breakeven price (worksheet 3)

Crop production costs and breakeven price (worksheet 4)

Grain storage costs (worksheet 5)

Cash flow (worksheet 6)

Calculating a net price for livestock (worksheet 7)

Calculating a net price for grain (worksheet 8)

Net worth statement (worksheet 9)

Based on their crop and livestock supply as well as their cash flow and net worth, complete the following worksheets:

Key ratios for livestock (worksheet 10)

Key ratios for grain (worksheet 10)

Developing a marketing plan for livestock (worksheet 11)

Developing a marketing plan for grain (worksheet 12)

Make a marketing decision for Bob and Barbara based on your interpretation of their situation. Consider that the Buyers' ability to assume risk would be similar to yours if you were in their situation.

Additional information is provided about two other cases, Roy and Ruby Renter and Oscar and Olga Owner. These situations are provided for the purpose of making comparisons in situations. Marketing decisions are affected by a family's financial situation.

CASE STUDY FOR MARKET PLAN

Bob and Barbara Buyer

Whether you own, rent, or are in the process of buying farm land, it is important to have a market plan. Bob and Barbara Buyer farm 480 acres. Information about their operation provides a way to work through a step-by-step market plan. The Buyers' financial situation is different from two other 480 acre operations, shown in the descriptions and table below.

Bob and Barbara Buyer. The Buyers operate a 480 acre hog-grain farm. They own 320 acres with an average debt of $1,000 per acre against it. They rent an additional 160 acres on a cash lease. They owe $30,000 on their machinery and equipment and have a $25,000 operating debt. The Buyers farrow and finish 850 head of market hogs each year.

Roy and Ruby Renter. The Renters operate a similar business. They rent their home and buildings for $10,000 per year, and the 440 crop acres for $110 per acre. They owe $30,000 on their machinery and equipment. They have an operating loan balance outstanding of $40,000 on July 1.

Oscar and Olga Owner. The Owners farm 480 acres, with 40 acres in farmstead, waste, and roads and the rest devoted to corn production. They own all 480 acres and have $70,000 invested in machinery. They have $50,000 invested in swine buildings and grain storage. They have no debts. However, they have 2 children in college and support Oscar's elderly mother who lives in a nursing home.

Summary of Farming Operations

	Roy and Ruby Renter	Oscar and Olga Owner	Bob and Barbara Buyer
Acres owned	0	480	320
Acres rented	480	0	160
Hogs sold	850	850	850
Acres of corn and set-aside	440	440	440
Machinery value	$ 70,000	$ 70,000	$ 70,000
Building value	0	$ 75,000	$ 75,000
Land value	0	$500,000	$420,000
Operating debt	$ 40,000	0	$ 25,000
Land debt	0	0	$320,000
Total farm assets	$187,600	$883,600	$617,600
Total debt	$ 70,000	0	$375,000
Net worth	$117,600	$883,600	$242,600
% debt	37%	0%	61%
Maximum operating debt	$ 50,000	no limit	$ 40,000
Breakeven corn price, $/bu.	$ 2.09	$ 1.51	$ 2.23
Breakeven hog price, $/cwt.	$47.02	$46.97	$47.08

Worksheet 1. DETERMINING LIVESTOCK AVAILABLE TO SELL

Livestock Hogs **(Commodity)**

1. Date born or purchased	Feb	Apr	June	Aug	Oct	Dec
2. Number weaned or purchased	145	145	162	162	150	150
3. Expected death loss %	6%	5%	5%	5%	6%	6%
4. Expected % retained for breeding stock	5%	5%	5%	5%	5%	5%
5. Number lost to death loss or breeding stock [(line 2 x 3) + (2 x 4)]	16	15	16	16	17	17
6. Number remaining to sell	129	130	146	146	133	133
7. Expected month to sell	Aug	Oct	Dec	Feb	April	June
8. Cwt. to sell	303	306	343	343	313	313

Livestock _____ **(Commodity)**

1. Date born or purchased						
2. Number weaned or purchased						
3. Expected death loss %						
4. Expected % retained for breeding stock						
5. Number lost to death loss or breeding stock [(line 2 x 3) + (2 x 4)]						
6. Number remaining to sell						
7. Expected month to sell						
8. Cwt. to sell						

Worksheet 2. DETERMINING GRAIN AVAILABLE TO SELL

A. Corn Production

Farm	Acres	Expected Yield	Operator Share-%	Operator Share-bu.
Home farm	252	140	100%	35,280
Rented farm	144	140	100%	20,160
Total	396		Total	55,440

B. Soybean Production

Farm	Acres	Expected Yield	Operator Share-%	Operator Share-bu.
Total			Total	

C. Feed Requirements

Type of Livestock	No. of Units	Bu. Corn Per Unit	Bu. Needed For Feed
Farrow-finish hogs	110 litters	110 bu.	12,100
		Total	

D. Bushels Available for Sale

	Corn	Soybeans
1. Bushels in storage available to sell	0	
2. Expected production, operator share	55,440	
3. Feed requirements	12,100	
4. Quantity for sale (line 1 + line 2 - line 3)	43,340	

Worksheet 3. FARROW-TO-FINISH WORKSHEET

A. Variable Costs Per Litter Including Replacements				Economic	Cash Flow @$2.23
1. Feed cost	Quantity	Unit			
Corn	110	bu.	@ $ 2.50 per unit =	$ 275	$ 245
Supplement	1,600	lb.	@ .17 per unit =	272	272
Other	additives		@ per unit =	25	25
Other			@ per unit =		
Total feed cost				$ 572	$ 542
2. Other variable costs					
Veterinary, medical, operating cost of facilities and equipment and miscellaneous costs				65	65
Interest cost on feed and operating cost					
feed cost				572	542
plus operating costs				65	65
times 0.5 (half-year cycle) =				318	303
times percent interest rate				8%	12%
equals interest cost on feed and operations				25	36.
Labor cost	Hours			15	
times rate per hour				6	
equals labor cost				90	30 (⅓ hired)
Marketing cost (hauling and commission)				30	30
Family living and taxes (half of total)				$ 12,250 ($18,000 $6,500)	
divided by litters per year				120	
equals family living and taxes per litter					102
Total variable costs (a)				$ 782	$ 805
3. Cull sow adjustment value per litter					
Number of head replaced				.40	
minus number of deaths per year				.02	
times weight of cull sow (cwt)				4.00	
equals cwt of cull sow production per sow unit				1.52	
times cwt. price of cull sow				$ 40.00	
equals **cull sow adjustment value per litter (b)**				$ 61	$ 61
4. **Total adjusted variable cost per litter (a-b)**				$ 721	$ 744

Worksheet 3. FARROW-TO-FINISH WORKSHEET

B. Fixed Cost per Litter		Economic	Cash Flow
1. Interest on breeding stock capital investment			
capital investment per litter	$113		
times percent annual interest rate	.08		
equals interest on breeding stock capital investment		$ 9	$ 0
Boar depreciation/replacement cost per litter			
purchase cost	400		
minus cull value	150		
equals boar depreciation	250		
divided by litters sired	25		
equals boar depreciation per litter		10	10
Depreciation, interest, taxes and insurance on buildings and equipment (15 to 20% x investment ÷ litters produced annually)		110	9
Cash rent on facilities, per litter			
Principal and interest on facilities per litter (20% of farm payment)			67
Total fixed cost per litter		$ 129	$ 86
2. **Total cost per litter** (A4 + B1)		$ 850	$ 830
3. Weight of hogs marketed per litter			
Hogs per litter	8.3		
minus replacement head per litter	.4		
minus death loss (head)	.4		
equals hogs marketed per litter	7.5		
times net market weight (cwt/head)	2.35		
equals weight of hogs per litter		17.63 cwt.	17.63 cwt.
4. Breakeven price needed per cwt. of market hogs (B2 ÷ B3)		$ 48.21	$ 47.08

Worksheet 4. FIGURING CROP PRODUCTION COSTS*

Crop Corn Acres 346 Yield 140

A. Operating costs for this crop	Economic	Cash Flow
1. Seed	$ 9,370	$ 9,370
2. Fertilizer and lime	14,022	14,022
3. Herbicide / Insecticide	10,763	10,763
4. Custom hire		
5. Crop insurance	1,790	1,790
6. Fuel, lubrication (total for all crops ___ / divided by total crop acres ___ / times acres in this crop ___)	6,825	6,825
7. Fuel for drying or commercial drying cost	5,370	5,370
8. Machinery repairs (total for all crops ___ / divided by total crop acres ___ / times acres in this crop ___)	6,000	6,000
9. Miscellaneous	2,520	2,520
10. Subtotal (both columns will be the same)	56,660	56,660
11. Return to operating capital: subtotal 56,600 × times percent return 8% × times months from planting to sale 7 = divided by 12 months equals	$ 2,644	
12. Interest payment on operating loan for this crop 2/3 @ 12%, 9 mo.		$ 3,400
13. Total	$ 59,304	$ 60,060

* This worksheet is calculated on a per bushel basis but could also be calculated on a per acre basis.

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Worksheet 4. FIGURING CROP PRODUCTION COSTS

		Economic	Cash Flow
B. Machinery ownership (total for all crop machinery)			
1. Depreciation		$6,000	
2. Return on investment			
current value	60,000		
times percent return	7%		
equals return on investment		4,200	
3. Machinery insurance premiums		300	300
4. Principal payments			
Interest payments			12,500
5. Subtotal for all crops		10,500	12,800
6. Total this crop			
divided by total crop acres			
times acres in this crop			
C. Labor, family living, and income tax (this crop)			
1. Hired labor for this crop		3,300	3,300
2. Unpaid labor:			
months	12 mo.		
times labor cost per month	1,200		
times percent for this crop	50%		
equals unpaid labor for this crop		7,200	
3. Family living			
living expense	18,000		
times percent expected from this crop	50%		
equals family living from this crop			9,000
4. Income tax			
income tax	6,500		
times percent expected from this crop	50%		
equals income tax from this crop			3,250
5. Total for this crop		10,500	15,550

Worksheet 4. FIGURING CROP PRODUCTION COSTS

	Economic	Cash Flow
D. Land and crop improvements (total for all cropland)		
1. Return on investment, if owned		
amount invested 400,000		
times percent of return 7%		
equals return on investment	28,000	
2. Property tax and insurance, if owned	5,600	5,600
3. Principal payments, if owned / Interest payments, if owned } 80% of farm payment		32,154
4. Cash rent, if land is cash rented		
cost per acre $110		
times number of acres 160		
equals total cash rent	17,600	17,600
5. Depreciation on improvements	2,000	
6. Subtotal for all crops	53,200	55,354
7. Total this crop		
subtotal for all crops		
divided by total crop acres		
times number of acres (this crop)		
E. Total costs for this crop		
1. Add totals for A, B, C, D	133,504	143,764
2. Total cost per acre:		
total (E1)		
divided by number of acres 396		
equals total cost per acre	337	363
3. Total cost per bushel or ton		
cost per acre (E2)		
divided by yield per acre 140		
equals total cost per bushel or ton	2.41	2.59
4. Breakeven price needed per bushel or ton		
cost per bushel		
minus deficiency payment per bushel .36		
equals breakeven price needed	$ 2.05	$ 2.23

Worksheet 5. Explanation of Estimation of Grain Storage Costs Worksheet

The accompanying worksheet shows how to calculate the **accumulated costs** of storing grain from harvest until each indicated delivery month. Storage facilities may be owned by the family, or rented from another farm enterprise, landlord, or commercial grain elevator.

Commercial Storage Charge. Rental charges may be a fixed rate per bushel, a monthly rate, or combination of a fixed rate for the first several months and a monthly rate thereafter.

Handling. Storage in facilities other than a commercial elevator where the grain is ultimately sold requires handling the grain into storage and out again. Estimate this cost per bushel.

Drying. Although grain must be dried to a standard moisture level such as 15.5% for corn, or receive an equivalent price discount, storage may require additional drying to prevent spoilage. In some years weather may permit storage in owned facilities without extra drying during cold weather months.

Shrink. Additional drying also causes some loss of dry matter, resulting in fewer total bushels by weight. This loss can be valued at the cash price at harvest. Commercial elevators often assume a shrink factor of 1.25 to 1.50 percent for each percentage point of moisture removed.

Extra Shrink to Store. Calculate extra shrink to store by multiplying the points of extra drying by the shrink factor and by the cash price at the start of storage.

Extra Drying Cost to Store. Multiply points of extra drying by the cost per point.

Quality Loss. Storage in on-farm facilities may result in losses due to spoilage and insect or rodent damage. Estimate the percentage of loss per bushel and multiply by the cash price at the start of storage.

Interest. Storage of grain postpones the receipt of cash income, resulting in added interest expense on borrowed money or reduced interest income on savings. A monthly interest cost can be calculated based on the cash harvest price. Identify your monthly interest rate on loan or savings and multiply by the cash price at the start of storage. Calculate for each month stored.

Income Tax. Delaying grain sales until the next tax accounting year postpones payment of tax on that income for one year, for cash basis taxpayers. The interest gained from funds that would have gone for income tax payments can be subtracted from the storage costs of holding grain into the new tax year. Identify your marginal tax rate and multiply by the cash price at the start of storage and by your identified annual interest rate on loan or savings.

Net Accumulated Storage Cost. All of the relevant storage costs can be summed to find the cumulative cost for each delivery month. By subtracting these storage costs from the various forward pricing opportunities available in each delivery month, an accurate comparison of these potential prices can be made.

Note. Because the interest, depreciation, insurance and maintenance costs for owned storage facilities will occur regardless of how long grain is stored in them, they do not need to be considered when comparing net prices for different delivery months.

Worksheet 5. ESTIMATION OF GRAIN STORAGE COSTS

Rented Storage

Cash price at start of storage $2.25

		Dec	Jan	Feb	Mar	Apr	May	Jun
1. Commercial storage charge								
-base fee until February 1 is	$0.10 /bu.	$0.100	.100	.100	.100	.100	.100	.100
-monthly fee thereafter is	0.03 /bu.	.000	.000	.030	.060	.090	.120	.150
2. Extra shrink to store								
-points of extra drying	2 pts	.056	.056	.056	.056	.056	.056	.056
-shrink factor	1.25 %							
3. Extra drying cost to store -variable cost per point removed	$0.015/pt	.030	.030	.030	.030	.030	.030	.030
4. Interest cost on loan or savings	12 %	.023	.045	.068	.090	.113	.135	.158
5. Income tax saving from post-poning sales until after Jan. 1 -marginal tax rate	36 %		$.097	.097	.097	.097	.097	.097
6. Net accumulated cost, rented storage		$0.21	.13	.19	.24	.29	.34	.40

Owned Storage

Cash price at start of storage $2.25

		Dec	Jan	Feb	Mar	Apr	May	Jun
1. Handling into and out of storage	$0.020/bu.	$0.020	.020	.020	.020	.020	.020	.020
2. Extra shrink to store past Feb.								
-points of extra drying	2 pts				.056	.056	.056	.056
-shrink factor	1.25 %							
3. Extra drying cost to store past February	$0.015 /pt				.030	.030	.030	.030
4. Quality loss for on-farm storage	1.00 %	$0.023	.023	.023	.023	.023	.023	.023
5. Interest cost on loan or savings	12.00 %	.023	.045	.068	.090	.113	.135	.158
6. Income tax saving from post-poning sales until after Jan. 1 -marginal tax rate	36 %		.097	.097	.097	.097	.097	.097
7. Net accumulated cost, owned storage		$.07	(0.01)	.01	.12	.14	.17	.19

Worksheet 6. FAMILY LIVING CASH FLOW BUDGET, 19__

Name Bob + Barbara Burger

	Total	Jul-Sept	Oct-Dec	Jan-Mar	Apr-June	
I. Beginning Balance						
II. INCOME FOR FAMILY LIVING						
From Farm Account	18,000	4,500	4,500	4,500	4,500	
Off-Farm Income						
Interest						
Other						
Total Inflow						
III. Beg.Bal.+Inflow						
IV. EXPENDITURES						
Expenditures for Family Living						
Food Purchased						
Clothing						
Personal Care						
Household						
Rent						
Health, Deductible						
Health, Other						
Recreation						
Education						
Contributions						
Personal Gifts						
Auto Operating						
Child Care						
Family Business						
Family Support						
Other						
Total Family Living						
Investment for Living						
Home Improvement						
Auto Purchase						
Savings						
Other Investment						
Total Investment						
Total Outflow						
V. Net Income or (Net Deficit)						

Worksheet 6. FARM/FAMILY CASH FLOW BUDGET, 19__

Name Bob and Barbara Buyer

	Total	Jul-Sept	Oct-Dec	Jan-Mar	Apr-June	
I. Beginning Balance						
INCOME						
Operating Receipts						
Livestock Sales						
Grain Sales						
Other Farm Income						
Government Payments						
Advance deficiency payment ($.40/bu. x 125 bu/a x 396a.)	19,800				19,800	
Capital Receipts						
Breeding Livestock						
Cull sows, boars	7,100	1,850	1,700	1,850	1,700	
Sale of Assets						
Off-Farm Income						
Other Income						
Interest						
Dividends						
II. Total Inflow	26,900	1,850	1,700	1,850	21,500	
III. Total Inflow Plus Beginning Balance						

Worksheet 6. Farm/Family Cash Flow Budget, 19__

Inflow Plus Beginning Balance	26,900	1,850	1,700	1,850	21,500	
EXPENDITURES						
Family Living	18,000	4,500	4,500	4,500	4,500	
Operating Expenditures						
Livestock Purchases	1,000	500		500		
Health and Breeding	8,400	2,100	2,100	2,100	2,100	
Livestock Feed	33,200	7,900	8,200	7,900	8,200	
Labor	6,900	825	3,000	825	2,250	
Custom Hire						
Repairs, Upkeep						
Fuel, Lube	18,195	4,072	8,112	1,925	4,086	
Vehicles						
Seed						
Fertilizer, Lime	34,155			10,512	23,643	
Chemicals						
Drying, Handling						
Marketing Costs	2,000	500	500	500	500	
Supplies		500		500		
Utilities	2,400	600	600	600	600	
Office						
Insurance	2,400	600	600	600	600	
Rent	17,600		8,800		8,800	
Other						
Taxes						
Property	5,600	2,800		2,800		
Federal Income						
State Income	6,500			6,500		
Other						
Debt Payment						
Machinery Principal Payment	12,500		12,500			
Land Interest Payment	40,192			40,192		
Capital Expenditures						
Machinery						
Breeding Livestock						
Buildings						
Improvements						
Other Outflow						
Savings						
Investments						
IV. Total Outflow	209,042	24,897	48912	79,954	55279	
V. Net Income or Net Deficit	-182,142	-23,047	-47,212	-78,104	-33,779	

Worksheet 7. CALCULATING A NET PRICE FOR LIVESTOCK

Commodity Hogs

	Step 8 Most Likely	Step 9 Range
CASH SALE		
Expected average price	$ 44.00	
Month of sale	Oct	
Cash price ($44.00 x 97%, table 2)	$ 42.70	$40.57 to 45.26 (95% to 106% Table 3)
FORWARD CONTRACT		
Delivery month	Oct	
Contract price	$ 42.75	
HEDGE		
Contract month	Oct	
Futures price when hedged	$ 42.60	
- Expected basis when lifted (table 4)	.11	1.84 to -1.73
- Commissions	.40	
= Net price	$ 42.09	$ 40.36 to 43.93
OPTION		
Contract month	Dec (option expires in Nov)	
Strike price	$ 43.00	
- Premium to purchase PUT	1.59	
- Expected basis when PUT is sold	.11	1.84 to -1.73
- Commissions	.30	
= Minimum net price	$ 41.00	$39.27 to 42.84
Maximum net price (maximum cash price - premium - commissions) 45.26 1.59 .30		$ 43.37

Worksheet 8. CALCULATING A NET PRICE FOR GRAIN

Commodity Corn

	Step 8	Step 9
CASH SALE	Most Likely	Range
Expected season average	$ 2.50	
Month of sale	Feb	
Cash price	$ 2.42 (97%)	2.22 to 2.70 (89% to 108%, Table 3)
- Storage costs	.01	
= Net price	$ 2.41	$ 2.21 to 2.69
FORWARD CONTRACT		
Delivery month	Feb	
Contract price	$ 2.35	
- Storage costs	.01	
= Net price	$ 2.34	
PRICE-LATER CONTRACTS		
Expected delivery month	Feb	
Expected cash price	$ 2.42	$ 2.22 to 2.70
- Contract service charges	.05	
= Net price	$ 2.37	$ 2.17 to 2.65
HEDGE		
Contract month	March	
Futures price when hedged	$ 2.68	
- Expected basis when lifted	.26	$ .20 to .32 (Table 4)
-Storage costs until delivery	.01	
- Commissions	.03	
= Net price	$ 2.38	$ 2.32 to 2.44
OPTION		
Contract month	March	
Strike price	$ 2.80	
- Premium to purchase PUT	.18	
+ Premium for selling a CALL	—	
- Expected basis when PUT is sold	.26	$ .20 to .32 (Table 4)
- Storage costs until delivery	.01	
- Commissions	.02	
= Minimum net price	$ 2.33	$ 2.27 to 2.39
Maximum net price (maximum cash net price - premium - storage -commissions)		$ 2.49

2.70 - .18 - .01 - .02

Worksheet 9. NET WORTH STATEMENT

Name Bob + Barbara Buyer Date July 1, 19___

FARM ASSETS		Market Value	FARM LIABILITIES	Market Value
Checking and Savings Accounts		8,000	Accounts payable (Sch. M)	
			Farm taxes due (Sch. N)	
			Short term notes and credit lines (Sch. O)	25,000
			Accrued interest - short (Sch. O)	
Crops held for sale or feed (Sch. A)			- intermediate (Sch. P)	
Investment in growing crops (Sch. B)		36,000	- long-term (Sch Q)	
Commercial feed on hand (Sch. C)		6,000	Due in 12 mo.- intermediate (Sch. P)	
Prepaid expenses (Sch. D)			- long-term (Sch. Q)	
Market livestock (Sch. E) 460 Ld.		27,600	Other	
Supplies on hand (Sch. F)				
Accounts receivable (Sch. G)				
Other				
Total Current Assets	Cost value 77,600	77,600	**Total Current Liabilities**	25,000
Unpaid Patronage Dividends (Sch. H)			Notes and contracts, remainder (Sch. P)	30,000
Breeding livestock (Sch. I)		10,000	Other	
Time certificates				
Farm securities				
Other				
Machinery and Equipment (Sch J)	Cost value 70,000	70,000		
Total Intermediate Assets	80,000	80,000	**Total Intermediate Liabilities**	30,000
Bldings/imprv (Sch. K)	60,000	60,000	Notes and contracts, remainder (Sch. P)	320,000
Farmland (Sch. L)	400,000	400,000	Other	
Farm Securities				
Other				
Total Long-term Assets	460,000	460,000	**Total Long-term Liabilities**	320,000
A. Total Farm Assets	617,600	617,600	**C. Total Farm Liabilities**	375,000
D. TOTAL FARM NET WORTH (A minus C)		242,600	Current Liabilities / Current Assets (mkt.) = 32 % Current Debt	
			Total Liabilities / Total Assets (mkt) = 61 % Total Debt	

NONFARM ASSETS		NONFARM LIABILITIES	
Bank Accounts		Credit card, charge accounts	
Household goods		Unpaid bills, other current	
Vehicles		Automobiles, other intermediate	
Real estate		Real estate, other long-term	
B. Total Nonfarm Assets		**E. Total Nonfarm Liabilities**	
F. TOTAL NONFARM NET WORTH (B - E)			

G. TOTAL NET WORTH (D + F)	

Schedules for completing net worth statement are in Unit 8 of Farm and Family Management notebook.

Worksheet 10. KEY RATIOS

Commodity (Livestock) Hogs

A. NET WORTH RISK RATIO

1. Current net worth of farm business $_____
2. Percent willing to risk 5 %
3. Maximum loss to risk (line 1 x line 2) $_____
4. Quantity to sell (Worksheet 1) _____
5. Net worth risk ratio (line 3 ÷ line 4) $_____

B. CASH FLOW RISK RATIO

1. Breakeven price needed (Worksheet 3) $_____
2. Expected average price (Worksheet 7) $_____
3. Cash flow risk ratio (line 1 ÷ line 2) _____ %
4. Quantity to sell (Worksheet 1) _____
5. Excess quantity to sell [(100% - line 3) x line 4] _____

C. PRICE PROTECTION RATIO

1. Quantity forward contracted 400 cwt.
2. Quantity hedged 0
3. Quantity for which PUT option is owned 200 cwt.
4. Total quantity with price protection (line 1 + 2 + 3) _____
5. Total quantity yet to be delivered _____
6. Price protection ratio (line 4 ÷ line 5) _____ %

Worksheet 10. KEY RATIOS

Commodity (Grain) Corn

A. NET WORTH RISK RATIO

1. Current net worth of farm business	$_____
2. Percent willing to risk	5 %
3. Maximum loss to risk (line 1 x line 2)	$_____
4. Quantity to sell (Worksheet 2)	_____
5. Net worth risk ratio (line 3 ÷ line 4)	$_____

B. CASH FLOW RISK RATIO

1. Breakeven price needed (Worksheet 4)	$_____
2. Expected season average price (Worksheet 8)	$_____
3. Cash flow risk ratio (line 1 ÷ line 2)	_____ %
4. Quantity to sell (Worksheet 2)	_____
5. Excess quantity to sell [(100% - line 3) x line 4]	_____

C. PRICE PROTECTION RATIO

1. Quantity forward contracted	5,000 bu.
2. Quantity hedged	5,000 bu.
3. Quantity for which PUT option is owned	5,000 bu.
4. Total quantity with price protection (line 1 + 2 + 3)	_____
5. Total quantity yet to be delivered	_____
6. Price protection ratio (line 4 ÷ line 5)	_____ %

Worksheet 11. DEVELOPING A MARKETING PLAN FOR LIVESTOCK

Commodity: Hogs

Step 1 a. How many hundredweight do you expect to sell during the next 12 months? (Worksheet 1)

expected_____cwt. pessimistic 1,750 cwt.

Step 2 b. What is your cash flow breakeven price for the livestock you expect to sell in the next 12 months? (Worksheet 3)

expected $_____/cwt. pessimistic $_____/cwt.

Step 3 c. What is the projected average cash price during the next 12 months? (Worksheet 7) $_____/cwt.

Step 4 No step 4, storage costs, for livestock marketing plan.

What are the likely prices in each sales period given the typical seasonal price cycle shown on Table 2 and a projected average price during the next 12 months?

Months / Seasonal Price Index	Yearly	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
d. Expected price	$_____	$_____	$_____	$_____	$_____
e. Expected cwt. to sell (Worksheet 1)	_____	_____	_____	_____	_____
f. Expected gross sales (d x e)	$_____	$_____	$_____	$_____	$_____
Step 5 g. Net cash flow before livestock and grain sales (Worksheet 6)	$_____	$_____	$_____	$_____	$_____
h. Net cash flow before grain sales (g - f)	$_____	$_____	$_____	$_____	$_____

Step 6 Omit for livestock plan.

Step 7 i. What other sources of cash are available?_____

Step 8 j. What pricing tools are available? (Worksheet 7)

Step 9 k. How much risk protection does each pricing tool offer? (Worksheet 7)

Step 10 l. How much risk can you afford? (Worksheet 10)

Worksheet 12. DEVELOPING A MARKETING PLAN FOR GRAIN

Commodity _____

==========

Step 1 a. How many stored bushels do you have available to sell?_____bu.(Worksheet 2)

b. How many new crop bushels do you expect to sell? _____bu. (Worksheet 2)

Step 2 c. What is your cash flow breakeven price after subtracting deficiency payments? (Worksheet 4)
-based on your expected yield of _____bushels per acre? $_____/bu.

-based on a pessimistic yield of 110 bushels per acre? $2.84 /bu.

Step 3 d. What is the projected average cash price during the next 12 months? $_____/bu. What are the most likely average cash prices for each quarter, for a "normal" crop or for a "short" crop, given the typical seasonal price cycle shown on Table 2 and a projected season average cash price or based on current outlook projections? (Worksheet 8)

	Season Average	_____ 1st Qtr.	_____ 2nd Qtr.	_____ 3rd Qtr.	_____ 4th Qtr.
Seasonal price index		_____	_____	_____	_____
e. Expected cash price	$_____	$_____	$_____	$_____	$_____
Step 4 f. Storage cost (Worksheet 5)		_____	_____	_____	_____
g. Expected net price (e - f)		$_____	$_____	$_____	$_____

	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Step 5 h. Net cash flow before grain sales (see h, Worksheet 11)	_____	_____	_____	_____	_____
Step 6 i. Bushels that need to be sold to meet cash flow (h ÷ g)	_____	_____	_____	_____	_____

Step 7 j. Contingency funds	Available	To Be Used			
-cash on hand	8,000	_____	_____	_____	_____
-operating credit	25,000	_____	_____	_____	_____

Step 8 k. What pricing tools are available? (Worksheet 8)

Step 9 l. How much risk protection does each pricing tool offer? (Worksheet 8)

Step 10 m. How much risk can you afford? (Worksheet 10)

DEVELOPING YOUR FARM MARKETING PLAN

Objective: The purpose of this exercise is to prepare a marketing plan for your own farm. Such a plan can be used to market your commodities and serves as a record for marketing plans from year to year.

The following worksheets are blank forms for you to record your farm information related to your market plan. Complete the following nine worksheets to record this information:

Livestock available to sell (worksheet 1)

Grain available to sell (worksheet 2)

Farrow-to-finish production costs and breakeven price (worksheet 3)

Crop production costs and breakeven price (worksheet 4)

Grain storage costs (worksheet 5)

Cash flow (worksheet 6)

Calculating a net price for livestock (worksheet 7)

Calculating a net price for grain (worksheet 8)

Net worth statement (worksheet 9)

Based on your crop and livestock supply as well as your cash flow and net worth, complete your marketing plan on the following worksheets:

Key ratios for livestock (worksheet 10)

Key ratios for grain (worksheet 10)

Developing a marketing plan for livestock (worksheet 11)

Developing a marketing plan for grain (worksheet 12)

Make a marketing plan based on information you have recorded on the worksheets. Discuss this plan with your spouse, family, or others, if it is appropriate. Monitor the plan as you carry it out, noting considerations for future marketing plans.

Worksheet 1. DETERMINING LIVESTOCK AVAILABLE TO SELL

Livestock _____**(Commodity)**

1. Date born or purchased						
2. Number weaned or purchased						
3. Expected death loss %						
4. Expected % retained for breeding stock						
5. Number lost to death loss or breeding stock [(line 2 x 3) + (2 x 4)]						
6. Number remaining to sell						
7. Expected month to sell						
8. Cwt. to sell						

Livestock _____**(Commodity)**

1. Date born or purchased						
2. Number weaned or purchased						
3. Expected death loss %						
4. Expected % retained for breeding stock						
5. Number lost to death loss or breeding stock [(line 2 x 3) + (2 x 4)]						
6. Number remaining to sell						
7. Expected month to sell						
8. Cwt. to sell						

Worksheet 2. DETERMINING GRAIN AVAILABLE TO SELL

A. Corn Production

Farm	Acres	Expected Yield	Operator Share-%	Operator Share-bu.
Total			Total	

B. Soybean Production

Farm	Acres	Expected Yield	Operator Share-%	Operator Share-bu.
Total			Total	

C. Feed Requirements

Type of Livestock	No. of Units	Bu. Corn Per Unit	Bu. Needed For Feed
		Total	

D. Bushels Available for Sale

	Corn	Soybeans
1. Bushels in storage available to sell		
2. Expected production, operator share		
3. Feed requirements		
4. Quantity for sale (line 1 + line 2 - line 3)		

Worksheet 3. FARROW-TO-FINISH WORKSHEET

A. Variable Costs Per Litter Including Replacements				Economic	Cash Flow
1. Feed cost	Quantity	Unit			
Corn	_____	_____	@ $_____ per unit =	$_____	$_____
Supplement	_____	_____	@ _____ per unit =	_____	_____
Other	_____	_____	@ _____ per unit =	_____	_____
Other	_____	_____	@ _____ per unit =	_____	_____
Total feed cost				$_____	$_____
2. Other variable costs					
Veterinary, medical, operating cost of facilities and equipment and miscellaneous costs				_____	_____
Interest cost on feed and operating cost					
feed cost			_____		
plus operating costs			_____		
times 0.5 (half-year cycle) =			_____		
times percent interest rate			_____		
equals interest cost on feed and operations				_____	_____
Labor cost		Hours	_____		
		times rate per hour	_____		
		equals labor cost		_____	_____
Marketing cost (hauling and commission)				_____	_____
Family living and taxes			$_____		
divided by litters per year			_____		
equals family living and taxes per litter					_____
Total variable costs (a)				$_____	$_____
3. Cull sow adjustment value per litter					
Number of head replaced			_____		
minus number of deaths per year			_____		
times weight of cull sow (cwt)			_____		
equals cwt of cull sow					
production per sow unit			_____		
times cwt. price of cull sow			_____		
equals **cull sow adjustment value per litter (b)**				$_____	$_____
4. **Total adjusted variable cost per litter (a-b)**				$_____	$_____

Worksheet 3. FARROW-TO-FINISH WORKSHEET

B. Fixed Cost per Litter	Economic	Cash Flow
1. Interest on breeding stock capital investment		
capital investment per litter _____		
times percent annual interest rate _____		
equals interest on breeding stock capital investment	$_____	$_____
Boar depreciation/replacement cost per litter		
purchase cost _____		
minus cull value _____		
equals boar depreciation _____		
divided by litters sired _____		
equals boar depreciation per litter	_____	_____
Depreciation, interest, taxes and insurance on buildings and equipment (15 to 20% x investment ÷ litters produced annually)	_____	_____
Cash rent on facilities, per litter	_____	_____
Principal and interest on facilities per litter		_____
Total fixed cost per litter	$_____	$_____
2. **Total cost per litter** (A4 + B1)	$_____	$_____
3. Weight of hogs marketed per litter		
Hogs per litter _____		
minus replacement head per litter _____		
minus death loss (head) _____		
equals hogs marketed per litter _____		
times net market weight (cwt/head) _____		
equals weight of hogs per litter	_____cwt.	_____cwt.
4. Breakeven price needed per cwt. of market hogs (B2 ÷ B3)	$_____	$_____

Worksheet 4. FIGURING CROP PRODUCTION COSTS*

Crop_____ Acres_____ Yield_____

A. Operating costs for this crop		Economic	Cash Flow
1. Seed		$_____	$_____
2. Fertilizer and lime		_____	_____
		_____	_____
		_____	_____
		_____	_____
3. Herbicide		_____	_____
		_____	_____
Insecticide		_____	_____
		_____	_____
4. Custom hire		_____	_____
5. Crop insurance		_____	_____
6. Fuel, lubrication			
total for all crops	_____		
divided by total crop acres	_____		
times acres in this crop	_____	_____	_____
7. Fuel for drying or commercial drying cost		_____	_____
8. Machinery repairs			
total for all crops	_____		
divided by total crop acres	_____		
times acres in this crop	_____	_____	_____
9. Miscellaneous		_____	_____
10. Subtotal (both columns will be the same)		_____	_____
11. Return to operating capital			
subtotal	_____		
times percent return	_____		
times months from planting to sale	_____		
divided by 12 months equals		$_____	
12. Interest payment on operating loan for this crop			$_____
13. Total		$_____	$_____

* This worksheet is calculated on a per bushel basis but could also be calculated on a per acre basis.

Worksheet 4. FIGURING CROP PRODUCTION COSTS

	Economic	Cash Flow
B. Machinery ownership (total for all crop machinery)		
1. Depreciation	_____	
2. Return on investment		
current value _____		
times percent return _____		
equals return on investment	_____	
3. Machinery insurance premiums	_____	_____
4. Principal payments	_____	
Interest payments		_____
5. Subtotal for all crops	_____	_____
6. Total this crop _____		
divided by total crop acres _____		
times acres in this crop _____	_____	_____
C. Labor, family living, and income tax (this crop)		
1. Hired labor for this crop	_____	_____
2. Unpaid labor:		
months _____		
times labor cost per month _____		
times percent for this crop _____		
equals unpaid labor for this crop	_____	_____
3. Family living		
living expense _____		
times percent expected from this crop _____		
equals family living from this crop		_____
4. Income tax		
income tax _____		
times percent expected from this crop _____		
equals income tax from this crop		_____
5. Total for this crop	_____	_____

Worksheet 4. FIGURING CROP PRODUCTION COSTS

	Economic	Cash Flow
D. Land and crop improvements (total for all cropland)		
1. Return on investment, if owned		
amount invested _____		
times percent of return _____		
equals return on investment	_____	
2. Property tax and insurance, if owned	_____	_____
3. Principal payments, if owned		
Interest payments, if owned		_____
4. Cash rent, if land is cash rented		
cost per acre _____		
times number of acres _____		
equals total cash rent	_____	_____
5. Depreciation on improvements	_____	
6. Subtotal for all crops	_____	_____
7. Total this crop		
subtotal for all crops _____		
divided by total crop acres _____		
times number of acres (this crop) _____	_____	_____
E. Total costs for this crop		
1. Add totals for A, B, C, D	_____	_____
2. Total cost per acre:		
total (E1) _____		
divided by number of acres _____		
equals total cost per acre	_____	_____
3. Total cost per bushel or ton		
cost per acre (E2) _____		
divided by yield per acre _____		
equals total cost per bushel or ton	_____	_____
4. Breakeven price needed per bushel or ton		
cost per bushel _____		
minus deficiency payment per bushel _____		
equals breakeven price needed	$_____	$_____

Worksheet 5. Explanation of Estimation of Grain Storage Costs Worksheet

The accompanying worksheet shows how to calculate the **accumulated costs** of storing grain from harvest until each indicated delivery month. Storage facilities may be owned by the family, or rented from another farm enterprise, landlord, or commercial grain elevator.

Commercial Storage Charge. Rental charges may be a fixed rate per bushel, a monthly rate, or combination of a fixed rate for the first several months and a monthly rate thereafter.

Handling. Storage in facilities other than a commercial elevator where the grain is ultimately sold requires handling the grain into storage and out again. Estimate this cost per bushel.

Drying. Although grain must be dried to a standard moisture level such as 15.5% for corn, or receive an equivalent price discount, storage may require additional drying to prevent spoilage. In some years weather may permit storage in owned facilities without extra drying during cold weather months.

Shrink. Additional drying also causes some loss of dry matter, resulting in fewer total bushels by weight. This loss can be valued at the cash price at harvest. Commercial elevators often assume a shrink factor of 1.25 to 1.50 percent for each percentage point of moisture removed.

Extra Shrink to Store. Calculate extra shrink to store by multiplying the points of extra drying by the shrink factor and by the cash price at the start of storage.

Extra Drying Cost to Store. Multiply points of extra drying by the cost per point.

Quality Loss. Storage in on-farm facilities may result in losses due to spoilage and insect or rodent damage. Estimate the percentage of loss per bushel and multiply by the cash price at the start of storage.

Interest. Storage of grain postpones the receipt of cash income, resulting in added interest expense on borrowed money or reduced interest income on savings. A monthly interest cost can be calculated based on the cash harvest price. Identify your monthly interest rate on loan or savings and multiply by the cash price at the start of storage. Calculate for each month stored.

Income Tax. Delaying grain sales until the next tax accounting year postpones payment of tax on that income for one year, for cash basis taxpayers. The interest gained from funds that would have gone for income tax payments can be subtracted from the storage costs of holding grain into the new tax year. Identify your marginal tax rate and multiply by the cash price at the start of storage and by your identified annual interest rate on loan or savings.

Net Accumulated Storage Cost. All of the relevant storage costs can be summed to find the cumulative cost for each delivery month. By subtracting these storage costs from the various forward pricing opportunities available in each delivery month, an accurate comparison of these potential prices can be made.

Note. Because the interest, depreciation, insurance and maintenance costs for owned storage facilities will occur regardless of how long grain is stored in them, they do not need to be considered when comparing net prices for different delivery months.

Worksheet 5. ESTIMATION OF GRAIN STORAGE COSTS

Rented Storage

Cash price at start of storage _____

		Dec	Jan	Feb	Mar	Apr	May	Jun
1. Commercial storage charge								
-base fee until February 1 is	_____/bu.	____	____	____	____	____	____	____
-monthly fee thereafter is	_____/bu.	____	____	____	____	____	____	____
2. Extra shrink to store								
-points of extra drying	_____pts	____	____	____	____	____	____	____
-shrink factor	_____%							
3. Extra drying cost to store	_____/pt	____	____	____	____	____	____	____
-variable cost per point removed								
4. Interest cost on loan or savings	_____%	____	____	____	____	____	____	____
5. Income tax saving from post-								
poning sales until after Jan. 1								
-marginal tax rate	_____%		____	____	____	____	____	____
6. Net accumulated cost, rented storage		____	____	____	____	____	____	____

Owned Storage

Cash price at start of storage _____

		Dec	Jan	Feb	Mar	Apr	May	Jun
1. Handling into and out of storage	_____/bu.	____	____	____	____	____	____	____
2. Extra shrink to store past Feb.								
-points of extra drying	_____pts				____	____	____	____
-shrink factor	_____%							
3. Extra drying cost to store	_____/pt				____	____	____	____
past February								
4. Quality loss for on-farm storage	_____%	____	____	____	____	____	____	____
5. Interest cost on loan or savings	_____%	____	____	____	____	____	____	____
6. Income tax saving from post-								
poning sales until after Jan. 1								
-marginal tax rate	_____%		____	____	____	____	____	____
7. Net accumulated cost, owned storage		____	____	____	____	____	____	____

Worksheet 6. FAMILY LIVING CASH FLOW BUDGET, 19__

Name _____

I. Beginning Balance						
II. INCOME FOR FAMILY LIVING						
From Farm Account						
Off-Farm Income						
Interest						
Other						
Total Inflow						
III. Beg.Bal.+Inflow						
IV. EXPENDITURES						
Expenditures for Family Living						
Food Purchased						
Clothing						
Personal Care						
Household						
Rent						
Health, Deductible						
Health, Other						
Recreation						
Education						
Contributions						
Personal Gifts						
Auto Operating						
Child Care						
Family Business						
Family Support						
Other						
Total Family Living						
Investment for Living						
Home Improvement						
Auto Purchase						
Savings						
Other Investment						
Total Investment						
Total Outflow						
V. Net Income or (Net Deficit)						

Worksheet 6. FARM/FAMILY CASH FLOW BUDGET, 19__

Name _____

I. Beginning Balance						
INCOME						
Operating Receipts						
Livestock Sales						
_____						
_____						
Grain Sales						
_____						
_____						
Other Farm Income						
_____						
_____						
Government Payments						
_____						
_____						
_____						
Capital Receipts						
Breeding Livestock _____						
_____						
_____						
Sale of Assets _____						
_____						
_____						
Off-Farm Income						
_____						
_____						
_____						
Other Income						
Interest_____						
Dividends_____						
_____						
_____						
II. Total Inflow						
III.Total Inflow Plus Beginning Balance						

Worksheet 6. Farm/Family Cash Flow Budget, 19__

Inflow Plus Beginning Balance						
EXPENDITURES						
Family Living						
Operating Expenditures						
Livestock Purchases						
Health and Breeding						
Livestock Feed						
Labor						
Custom Hire						
Repairs, Upkeep						
Fuel, Lube						
Vehicles						
Seed						
Fertilizer, Lime						
Chemicals						
Drying, Handling						
Marketing Costs						
Supplies						
Utilities						
Office						
Insurance						
Rent						
Other						
Taxes						
Property						
Federal Income						
State Income						
Other						
Debt Payment						
Principal Payment						
Interest Payment						
Capital Expenditures						
Machinery						
Breeding Livestock						
Buildings						
Improvements						
Other Outflow						
Savings						
Investments						
IV. Total Outflow						
V. Net Income or Net Deficit						

Worksheet 7. CALCULATING A NET PRICE FOR LIVESTOCK

Commodity _____

	Step 8 Most Likely	**Step 9** Range
CASH SALE		
Expected average price	$_____	
Month of sale	_____	
Cash price	$_____	$_____
FORWARD CONTRACT		
Delivery month	_____	
Contract price	$_____	
HEDGE		
Contract month	_____	
Futures price when hedged	$_____	
- Expected basis when lifted	_____	_____
- Commissions	_____	
= Net price	$_____	$_____
OPTION		
Contract month	_____	
Strike price	$_____	
- Premium to purchase PUT	_____	
- Expected basis when PUT is sold	_____	_____
- Commissions	_____	
= Minimum net price	$_____	$_____
Maximum net price (maximum cash price - premium - commissions)		$_____

Worksheet 8. CALCULATING A NET PRICE FOR GRAIN

Commodity _____

	Step 8	Step 9
	Most Likely	Range
CASH SALE		
Expected season average	$_____	
Month of sale	_____	
Cash price	$_____	_____
- Storage costs	_____	
= Net price	$_____	$_____
FORWARD CONTRACT		
Delivery month	_____	
Contract price	$_____	
- Storage costs	_____	
= Net price	$_____	
PRICE-LATER CONTRACTS		
Expected delivery month	_____	
Expected cash price	$_____	$_____
- Contract service charges	_____	
= Net price	$_____	$_____
HEDGE		
Contract month	_____	
Futures price when hedged	$_____	
- Expected basis when lifted	_____	$_____
-Storage costs until delivery	_____	
- Commissions	_____	
= Net price	$_____	$_____
OPTION		
Contract month	_____	
Strike price	$_____	
- Premium to purchase PUT	_____	
+ Premium for selling a CALL	_____	
- Expected basis when PUT is sold	_____	$_____
- Storage costs until delivery	_____	
- Commissions	_____	
= Minimum net price	$_____	$_____
Maximum net price (maximum cash net price - premium - storage -commissions)		$_____

Worksheet 9. NET WORTH STATEMENT

Name _____ Date _____, 19 ____

FARM ASSETS		Market Value	FARM LIABILITIES	Market Value
Checking and Savings Accounts			Accounts payable (Sch. M)	
			Farm taxes due (Sch. N)	
			Short term notes and credit lines (Sch. O)	
			Accrued interest - short (Sch. O)	
Crops held for sale or feed (Sch. A)			- intermediate (Sch. P)	
Investment in growing crops (Sch. B)			- long-term (Sch Q)	
Commercial feed on hand (Sch. C)			Due in 12 mo.- intermediate (Sch. P)	
Prepaid expenses (Sch. D)			- long-term (Sch. Q)	
Market livestock (Sch. E)			Other	
Supplies on hand (Sch. F)				
Accounts receivable (Sch. G)				
Other				
Total Current Assets	Cost value		**Total Current Liabilities**	
Unpaid Patronage Dividends (Sch. H)			Notes and contracts, remainder (Sch. P)	
Breeding livestock (Sch. I)			Other	
Time certificates				
Farm securities				
Other				
Machinery and Equipment (Sch J)	Cost value			
Total Intermediate Assets			**Total Intermediate Liabilities**	
Bldings/imprv (Sch. K)			Notes and contracts, remainder (Sch. P)	
Farmland (Sch. L)			Other	
Farm Securities				
Other				
Total Long-term Assets			**Total Long-term Liabilities**	
A.Total Farm Assets			**C. Total Farm Liabilities**	
D. TOTAL FARM NET WORTH (A minus C)			Current Liabilities / Current Assets (mkt.) = _____ % Current Debt	
			Total Liabilities / Total Assets (mkt) = _____ % Total Debt	

NONFARM ASSETS		NONFARM LIABILITIES	
Bank Accounts		Credit card, charge accounts	
Household goods		Unpaid bills, other current	
Vehicles		Automobiles, other intermediate	
Real estate		Real estate, other long-term	
B. Total Nonfarm Assets		**E. Total Nonfarm Liabilities**	
F. TOTAL NONFARM NET WORTH (B - E)			

G. TOTAL NET WORTH (D + F)	

Schedules for completing net worth statement are in Unit 8 of Farm and Family Management notebook.

Worksheet 10. KEY RATIOS

Commodity (Livestock)_____

A. NET WORTH RISK RATIO

1. Current net worth of farm business $_____
2. Percent willing to risk _____%
3. Maximum loss to risk (line 1 x line 2) $_____
4. Quantity to sell (Worksheet 1) _____
5. Net worth risk ratio (line 3 ÷ line 4) $_____

B. CASH FLOW RISK RATIO

1. Breakeven price needed (Worksheet 3) $_____
2. Expected average price (Worksheet 7) $_____
3. Cash flow risk ratio (line 1 ÷ line 2) _____%
4. Quantity to sell (Worksheet 1) _____
5. Excess quantity to sell [(100% - line 3) x line 4] _____

C. PRICE PROTECTION RATIO

1. Quantity forward contracted _____
2. Quantity hedged _____
3. Quantity for which PUT option is owned _____
4. Total quantity with price protection (line 1 + 2 + 3) _____
5. Total quantity yet to be delivered _____
6. Price protection ratio (line 4 ÷ line 5) _____%

Worksheet 10. KEY RATIOS

Commodity (Grain)_____

A. NET WORTH RISK RATIO

1. Current net worth of farm business $_____
2. Percent willing to risk _____%
3. Maximum loss to risk (line 1 x line 2) $_____
4. Quantity to sell (Worksheet 2) _____
5. Net worth risk ratio (line 3 ÷ line 4) $_____

B. CASH FLOW RISK RATIO

1. Breakeven price needed (Worksheet 4) $_____
2. Expected season average price (Worksheet 8) $_____
3. Cash flow risk ratio (line 1 ÷ line 2) _____%
4. Quantity to sell (Worksheet 2) _____
5. Excess quantity to sell [(100% - line 3) x line 4] _____

C. PRICE PROTECTION RATIO

1. Quantity forward contracted _____
2. Quantity hedged _____
3. Quantity for which PUT option is owned _____
4. Total quantity with price protection (line 1 + 2 + 3) _____
5. Total quantity yet to be delivered _____
6. Price protection ratio (line 4 ÷ line 5) _____%

Worksheet 11. DEVELOPING A MARKETING PLAN FOR LIVESTOCK

Commodity: _____

==========

Step 1 a. How many hundredweight do you expect to sell during the next 12 months? (Worksheet 1)

expected_____cwt. pessimistic_____cwt.

Step 2 b. What is your cash flow breakeven price for the livestock you expect to sell in the next 12 months? (Worksheet 3)

expected $_____/cwt. pessimistic $_____/cwt.

Step 3 c. What is the projected average cash price during the next 12 months? (Worksheet 7) $_____/cwt.

Step 4 No step 4, storage costs, for livestock marketing plan.

What are the likely prices in each sales period given the typical seasonal price cycle shown on Table 2 and a projected average price during the next 12 months?

Months	Yearly	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Seasonal Price Index					
d. Expected Price	$_____	$_____	$_____	$_____	$_____
e. Expected Cwt. to sell (Worksheet 1)	_____	_____	_____	_____	_____
f. Expected gross sales (d x e)	$_____	$_____	$_____	$_____	$_____
Step 5 g. Net cash flow before livestock and grain sales (Worksheet 6)	$_____	$_____	$_____	$_____	$_____
h. Net cash flow before grain sales (g - f)	$_____	$_____	$_____	$_____	$_____

Step 6 Omit for livestock plan.

Step 7 i. What other sources of cash are available?_____

Step 8 j. What pricing tools are available? (Worksheet 7)

Step 9 k. How much risk protection does each pricing tool offer? (Worksheet 7)

Step 10 l. How much risk can you afford? (Worksheet 10)

Worksheet 12. DEVELOPING A MARKETING PLAN FOR GRAIN

Commodity _____

Step 1 a. How many stored bushels do you have available to sell?_____bu.(Worksheet 2)

b. How many new crop bushels do you expect to sell? _____bu.(Worksheet 2)

Step 2 c. What is your cash flow breakeven price after subtracting deficiency payments? (Worksheet 4)
-based on your expected yield of _____bushels per acre? $_____/bu.

-based on a pessimistic yield of _____bushels per acre? $_____/bu.

Step 3 d. What is the projected average cash price during the next 12 months? $_____/bu. What are the most likely average cash prices for each quarter, for a "normal" crop or for a "short" crop, given the typical seasonal price cycle shown on Table 2 and a projected season average cash price or based on current outlook projections? (Worksheet 8)

	Season Average	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Seasonal price index					
e. Expected cash price	$	$	$	$	$
Step 4 f. Storage cost (Worksheet 5)					
g. Expected net price (e - f)		$	$	$	$

	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Step 5 h. Net cash flow before grain sales (see h, Worksheet 11)					
Step 6 i. Bushels that need to be sold to meet cash flow (h ÷ g)					

Step 7 j. Contingency funds Available To Be Used

-cash on hand					
-operating credit					

Step 8 k. What pricing tools are available? (Worksheet 8)

Step 9 l. How much risk protection does each pricing tool offer? (Worksheet 8)

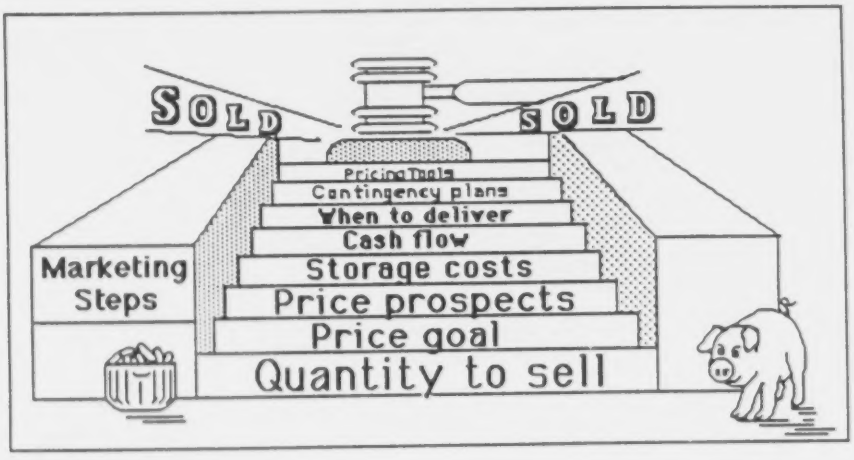
Step 10 m. How much risk can you afford? (Worksheet 10)

PLAN YOUR MARKETING:
ENHANCE PROFITS AND REDUCE RISK

OBJECTIVES

Upon completion of this unit each farm family will:

1. estimate the quantities of livestock or crops available to be marketed;
2. set price goals considering breakeven costs, storage costs, and price outlook;
3. project delivery periods considering cash flow needs;
4. compare alternative pricing tools according to net prices and riskiness;
5. assess the market risk-bearing ability of the farm based on solvency and liquidity positions; and
6. complete their own market plan.



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INTEREST APPROACH

Risk is an important part of marketing. You assume the risk of price changes when you sell on the cash market. You can transfer risk to speculators by hedging or using options. Each farm family is unique in its ability to accept risk, both financially and personally. The following activity can demonstrate some characteristics associated with risk.

1. Place a penny on the table and ask a volunteer to snatch up the penny. Inform the volunteer that you will attempt to smash his or her hand with a piece of foam rubber (or some other soft item). Is the person willing to take the chance? What is the risk involved?

2. Now, place a second penny on the table and this time use a wooden mallet or ruler (or some other hard object). Is the person less willing to take the chance? What has changed?

3. The third time place two quarters on the table and ask the volunteer to do the same. If the person is successful in snatching up the coins, he or she can keep the change. If not, the change will belong to the person holding the mallet. Did the person take the risk? What is different about this situation?

4. In the final situation, inform the volunteer that for one of the four quarters, you will provide some protection in the form of a padded glove (or some other suitable protection). What has happened to the risk in this situation? Did the person take the chance?

In the first situation, little risk was involved. There is also little reward. In the second situation, you have changed the consequences of failure, that is, one could get hurt with a wooden mallet. In the third situation, you have changed the consequences of success in the form of a bigger payoff. You have also increased the consequences of failure. The volunteer could lose fifty cents. And finally, in the fourth situation, you have increased the chances of success by shifting the risk to the glove rather than the hand.

How do the demonstrated situations compare to the following marketing situations?

- a farm family that is financially secure, owns their land and buildings, and has little or no debt.
- a farm family that has substantial debt on land, buildings, and machinery.
- a farm family expects grain prices to increase and hopes to sell at the peak of the market.
- a farm family that hedges or uses options to market their livestock.

ALTERNATE INTEREST APPROACH

Show a ten minute section of the Chicago Board of Trade video tape *Hedging/Speculating/Ag-Futures/Financial Futures/Options*. Almost any section of this tape can serve as a short review of marketing tools and get participants thinking about marketing. Be careful, however, not to use the entire tape. Because each ten-minute section has repetitive parts, watching the entire fifty minutes could squelch interest rather than develop it. The tape is available on free loan from Venard Films Ltd., Box 1332, Peoria, Illinois, 61654.

TEACHING OUTLINE

Materials Needed	Approximate Time (Min)	Teaching Guides	Reference Page
TM 12-1 to TM 12-3	5	Discuss sources of risk and financial management	12-3
TM 12-4 to TM 12-6	5	Review pricing alternatives	12-4
TM 12-7	10	Discuss steps of developing a marketing plan	12-6 to 12-11
TM 12-8 to TM 12-27	40	Discuss Bob and Barbara Buyers' farming situation	12-13 to 12-18
EX 12-1		Complete exercise 12-1 worksheets 10, 11 and 12 Work the exercise as couples or in small groups; or, use the computer disk to illustrate the Buyers' market plan.	12-19 to 12-32
EX 12-2	10	Provide guidance for participants to complete their own market plans on exercise 12-2 (by hand or on computer) at home.	12-33 to 12-53
TM 12-28		Summarize.	12-11 and 12-12

OPTIONAL ACTIVITIES

Discuss key ratios for Roy and Ruby Renter and Oscar and Olga Owner (see page TG 12-5 and TG 12-6). Make comparisons between each situation. Discuss how a farm family's financial situation affects their marketing decisions.

ON-FARM ACTIVITIES AND EVALUATION

Have participants complete worksheets for their own farm on EX 12-2. Review this with the participants if they are willing to share the information.

Provide the computer disk for participants to copy and use at home. The computer disk contains Worksheets 1 through 12 with the example for Bob and Barbara Buyer. It also provides for the participants to fill in the worksheets for their own operations.

Index to spreadsheet templates on Lotus and Appleworks.

The computer disk provided with this unit contains spreadsheet programs that should make calculations of the worksheets more convenient. The front side has spreadsheet templates for use with Lotus on IBM or IBM compatible computers. The reverse side has spreadsheet templates for use with Appleworks on Apple II computers. Spreadsheet templates on this side can also be used with 3-Easy-Pieces on Apple III computers.

The following spreadsheet templates are on the disk and appear with these titles:

Disk Name	Worksheet Title
WK01LVST.WK1	Determining Livestock Available to Sell
WK02CROP.WK1	Determining Grain Available to Sell
WK03LVST.WK1	Farrow-to-Finish Worksheet
WK04CROP.WK1	Figuring Crop Production Costs
WK05CROP.WK1	Estimation of Grain Storage Costs
WK06CASH.WK1	Farm and Family Cash Flow Budget
WK07LVST.WK1	Calculating a Net Price for Livestock
WK08CROP.WK1	Calculating a Net Price for Grain
WK09NETW.WK1	Net Worth Statement
WK10LVST.WK1	Key Ratios (Livestock)
WK10CROP.WK1	Key Ratios (Grain)
WK11&12.WK1	Developing a Marketing Plan for Livestock Developing a Marketing Plan for Grain

If you need directions for using Lotus or Appleworks spreadsheets, Unit 7 of the Farm and Family Management materials provides such information.

COMMENTS ON WORKSHEETS

Worksheet 3. Value home grown feed at market price for economic (opportunity) costs, but use the cash flow breakeven price from worksheet 4 for the cash flow column.

Family living expenses and income taxes are arbitrarily divided equally between the corn and the hogs.

Worksheet 4. Calculations could also be done "per acre."

Worksheet 6. Shows cash flow needs before grain and livestock sales.

Worksheet 7. Forward contract has the highest most likely price, and no risk of it going lower. Not forward pricing and waiting to see how the cash market moves has the most upside potential while the downside (lower range) is not much worse than for a hedge or buying a PUT option. How much do you trust your forecaster? Roy and Ruby Renter as well as Barb and Bob Buyer may want to contract some, even at a loss (see Worksheet 10).

Worksheet 8. Looking at sales for February delivery delays income tax payments for a year and still provides cash for spring expenses.

The forward contract will be above even the Buyers' breakeven. A hedge offers a little more chance for gain and is easier to reverse than a forward contract in case of low yields. Oscar and Olga Owner may want to wait and see if dry weather boosts prices later.

Worksheet 10. Key Ratios - Hogs

A. Net Worth Risk Ratio	Buyers	Owners	Renters
1. Current net worth	$242,600	$883,600	$117,600
2. Percentage to risk	5%	5%	5%
3. Maximum loss	$12,130	$44,180	$5,880
4. Quantity to sell	1,921 cwt.	1,921 cwt.	1,921 cwt.
5. Net worth risk ratio	$6.31	$23.00	$3.06

Buyers could lose over $6 per hundred on their hogs and still lose only 5 percent of their net worth, while the Renters can lose only $3 per cwt.

Breakeven price	$47.08	$46.97	$47.02
Minimum price	$40.77	$23.97	$43.96

The advantage the Owners enjoy of having low land costs is less of a factor in determining breakeven prices for hogs, but their high net worth still allows them to take more marketing risks.

B. Cash Flow Risk Ratio	Buyers	Owners	Renters
1. Breakeven price	$47.08	$46.97	$47.02
2. Expected average price	$44.00	$44.00	$44.00
3. Cash flow risk ratio	107%	107%	107%
4. Total quantity to sell	1,921 cwt.	1,921 cwt.	1,921 cwt.
5. Excess to sell	none	none	none

All three families will have to achieve an above average price to break even on hogs. Each needs to form a contingency plan to supplement their cash income by the use of savings or credit. There is little room for speculation on hog market this year.

C. Price Protection Ratio

For the Buyers, if 400 cwt. have already been forward contracted and PUT options owned on 200 cwt. more, then 600 cwt. or 31 percent of the expected production for the next year is protected from price variability.

Worksheet 10. Key Ratios - Grain

A. Net Worth Risk Ratio	Buyers	Owners	Renters
1. Current net worth	$242,600	$883,600	$117,600
2. Percentage to risk	5%	5%	5%
3. Maximum loss	$12,130	$44,180	$5,880
4. Quantity to sell	43,340 bu.	43,340 bu.	43,340 bu.
5. Net worth risk ratio	$0.28	$1.02	$0.14

Owners can market their corn for over $1.00 per bu. below their breakeven without severely affecting their financial solvency.

Breakeven price	$2.23	$1.51	$2.09
Minimum price	$1.95	$0.49	$1.95

Owners can basically aim for the highest selling price without regard to risk. Buyers and Renters may want to forward contract or hedge some grain now at a price above their breakeven level.

B. Cash Flow Risk Ratio	Buyers	Owners	Renters
1. Breakeven price	$2.23	$1.51	$2.09
2. Expected average price*	$2.40	2.40	$2.40
3. Cash flow risk ratio	93%	63%	87%
4. Total quantity to sell	43,340 bu.	43,340 bu.	43,340 bu.
5. Excess to sell	3,034 bu.	16,036 bu.	5,634 bu.

* Expected season average price of $2.50 minus $0.10 average storage costs.

If the Buyers can achieve an average net price of $2.40 on 93% of their crop they have about 3,000 bushels on which they can take more risk. The Owners and Renters can take higher risk on more bushels.

Remember that prior to harvest there is also production risk, i.e. there may be fewer bushels to sell than expected.

C. Price Production Ratio

The same example could apply to all three cases. For the Buyers, 37 percent of the expected sales are protected to some extent from price variations, while 63 percent is still at risk.

Worksheet 11. Hogs will supply some cash flow every other month, but not enough to take care of all needs. Over $9,000 is needed in July-September, and must come from savings or short-term borrowing.

Worksheet 12. Over 12,000 bushels need to be sold by December to meet cash flow needs, unless cash on hand and short-term borrowing are used. The Renters may want to sell at least enough to avoid paying for commercial storage.

Worksheet 10. KEY RATIOS

Commodity (Livestock) Hogs

A. NET WORTH RISK RATIO

1. Current net worth of farm business worksheet 9	$ 242,600
2. Percent willing to risk	5 %
3. Maximum loss to risk (line 1 x line 2)	$ 12,130
4. Quantity to sell (Worksheet 1)	1,921 cwt
5. Net worth risk ratio (line 3 ÷ line 4)	$ 6.31

B. CASH FLOW RISK RATIO

1. Breakeven price needed (Worksheet 3)	$ 47.08
2. Expected average price (Worksheet 7)	$ 44.00
3. Cash flow risk ratio (line 1 ÷ line 2)	107 %
4. Quantity to sell (Worksheet 1)	1,921 cwt
5. Excess quantity to sell [(100% - line 3) x line 4]	none

C. PRICE PROTECTION RATIO

1. Quantity forward contracted	400 cwt
2. Quantity hedged	0
3. Quantity for which PUT option is owned	200 cwt
4. Total quantity with price protection (line 1 + 2 + 3)	600 cwt
5. Total quantity yet to be delivered	1,921 cwt
6. Price protection ratio (line 4 ÷ line 5)	31 %

Worksheet 10. KEY RATIOS

Commodity (Grain) Corn

A. NET WORTH RISK RATIO

1. Current net worth of farm business worksheet 9	$ 242,600
2. Percent willing to risk	5 %
3. Maximum loss to risk (line 1 x line 2)	$ 12,130
4. Quantity to sell (Worksheet 2)	43,340 bu
5. Net worth risk ratio (line 3 ÷ line 4)	$ .28

B. CASH FLOW RISK RATIO

1. Breakeven price needed (Worksheet 4)	$ 2.23
2. Expected season average price (Worksheet 8)	$ 2.50
3. Cash flow risk ratio (line 1 ÷ line 2)	89 %
4. Quantity to sell (Worksheet 2)	43,340
5. Excess quantity to sell [(100% - line 3) x line 4]	4,767

C. PRICE PROTECTION RATIO

1. Quantity forward contracted	5000 bu
2. Quantity hedged	5000 bu
3. Quantity for which PUT option is owned	5000 bu
4. Total quantity with price protection (line 1 + 2 + 3)	15,000 bu
5. Total quantity yet to be delivered	43,340 bu
6. Price protection ratio (line 4 ÷ line 5)	37 %

Worksheet 11. DEVELOPING A MARKETING PLAN FOR LIVESTOCK

Commodity: Hogs

Step 1 a. How many hundredweight do you expect to sell during the next 12 months? (Worksheet 1)

expected 1,921 cwt. pessimistic 1,750 cwt.

Step 2 b. What is your cash flow breakeven price for the livestock you expect to sell in the next 12 months? (Worksheet 3)

expected $ 47.08 /cwt. pessimistic $ 51.68 /cwt.

Step 3 c. What is the projected average cash price during the next 12 months? (Worksheet 7) $ 44.00 /cwt.

Step 4 No step 4, storage costs, for livestock marketing plan.

What are the likely prices in each sales period given the typical seasonal price cycle shown on Table 2 and a projected average price during the next 12 months?

Months	Yearly	Jul-Sept 1st Qtr.	Oct.-Dec 2nd Qtr.	Jan-Mar 3rd Qtr.	Apr-June 4th Qtr.
Seasonal Price Index		105%	97%	100%	97%
d. Expected price	$ 44	$ 46.20	$ 42.70	$ 44.00	$ 42.70
e. Expected cwt. to sell (Worksheet 1)	1,921	303	649	343	626
f. Expected gross sales (d x e)	$84,524	$13,999	$27,712	$15,092	$26,730
Step 5 g. Net cash flow before livestock and grain sales (Worksheet 6)	$-182,142	$-23,047	$-47,212	$-78,104	$-33,779
h. Net cash flow before grain sales (g - f)	$-97,618	$-9048	$-19,500	$-63,012	$-7,049

Step 6 Omit for livestock plan.

Step 7 i. What other sources of cash are available? Savings, operating loan

Step 8 j. What pricing tools are available? (Worksheet 7)

Step 9 k. How much risk protection does each pricing tool offer? (Worksheet 7)

Step 10 l. How much risk can you afford? (Worksheet 10)

Worksheet 12. DEVELOPING A MARKETING PLAN FOR GRAIN

Commodity Corn

Step 1 a. How many stored bushels do you have available to sell? 0 bu.(Worksheet 2)

b. How many new crop bushels do you expect to sell? 43,340 bu.(Worksheet 2)

Step 2 c. What is your cash flow breakeven price after subtracting deficiency payments? (Worksheet 4)
-based on your expected yield of 140 bushels per acre? $ 2.23 /bu.

-based on a pessimistic yield of 110 bushels per acre? $ 2.84 /bu.

Step 3 d. What is the projected average cash price during the next 12 months? $2.50 /bu. What are the most likely average cash prices for each quarter, for a "normal" crop or for a "short" crop, given the typical seasonal price cycle shown on Table 2 and a projected season average cash price or based on current outlook projections? (Worksheet 8)

	Season Average	Jul-Sep 1st Qtr.	Oct-Dec 2nd Qtr.	Jan-Mar 3rd Qtr.	Apr-June 4th Qtr.
Seasonal price index			93%	97%	104%
e. Expected cash price	$ 2.50	$ -	$ 2.32	$ 2.42	$ 2.60
Step 4 f. Storage cost (Worksheet 5)		-	.00	.01	.17
g. Expected net price (e - f)		$ -	$ 2.32	$ 2.41	$ 2.43

	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Step 5 h. Net cash flow before grain sales (see h, Worksheet 11)	-97,618	-9,048	-19,500	-63,012	-7,049
Step 6 i. Bushels that need to be sold to meet cash flow (h ÷ g)	41,351	-	12,305	26,146	3,900

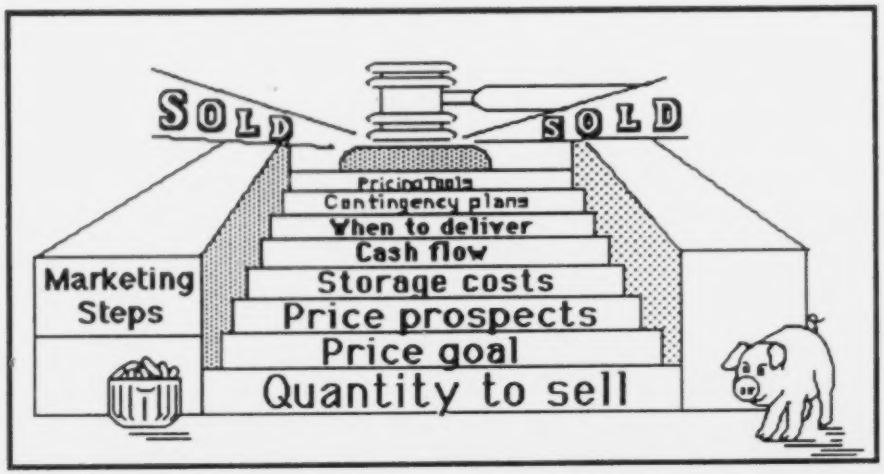
Step 7 j. Contingency funds

	Available	To Be Used			
-cash on hand	8,000				
-operating credit	25,000				

Step 8 k. What pricing tools are available? (Worksheet 8)

Step 9 l. How much risk protection does each pricing tool offer? (Worksheet 8)

Step 10 m. How much risk can you afford? (Worksheet 10)



DEVELOPING A MARKETING PLAN

Farm and Family Management

TM 12-1

SOURCES OF RISK

- volatility of cash commodity markets
- basis
- production risks

FINANCIAL MANAGEMENT

- Solvency
- Liquidity

PRICING ALTERNATIVES

- Sell Cash
- Forward Contract
- Price-later Contracts
- Hedge
- Options (buy put)

A Comparison of Pricing Alternatives

	Sell Cash	Forward Contract	Hedge	Options (buy put)
Information needed	cash price	contract price, expected quantity	futures prices, expected quantity, basis	futures prices, expected quantity, basis, premiums
Quantity restrictions	no	no	yes	yes
Reversible	no	no	yes	yes

A Comparison of Pricing Alternatives

	Sell Cash	Forward Contract	Hedge	Options (buy put)
Control over:				
• production risk	no	no	no	no
• cash price risk				
preharvest	no	some	some	some
postharvest	no	yes	yes	yes
• basis risk	yes	yes	no	no
Cash flow implications				
• cash received	delivery	delivery	delivery	delivery
• broker fees	no	no	yes	yes
• margin account	no	no	yes	no
• other costs	no	no	no	premium

Farm and Family Management

TM 12-6

DEVELOPING A PLAN

Step 1. Quantity to Sell

Step 2. Price Goal

Step 3. Price Prospects

Step 4. Storage Costs

Step 5. Cash Flow

Step 6. When to Deliver

Step 7. Contingency Plans

Step 8. Pricing Tools

Step 9. Price Variability

Step 10. Risk-bearing Ability

A family that owns and rents

Bob and Barbara Buyer. The Buyers operate a 480 acre hog-grain farm. They own 320 acres with an average debt of $1,000 per acre against it. They rent an additional 160 acres on a cash lease. They owe $30,000 on their machinery and equipment and have $25,000 operating debt. The Buyers farrow and finish 850 head of market hogs each year.

Acres owned	320
Acres rented	160
Hogs sold	850
Acres of corn and set-aside	440
Machinery value	$ 70,000
Building value	$ 75,000
Land value	$420,000
Operating debt	$ 25,000
Land debt	$320,000
Total farm assets	$617,600
Total debt	$375,000
Net worth	$242,600
% debt	61%
Maximum operating debt	$ 40,000

DETERMINING LIVESTOCK AVAILABLE TO SELL

(Worksheet 1)

Livestock _____

1. Date born or purchased _____
2. Number weaned or purchased _____
3. Expected death loss % _____
4. Expected % retained for breeding stock _____
5. Number lost to death or breeding stock _____
6. Number remaining to sell _____
7. Expected month to sell _____
8. Cwt. to sell _____

DETERMINING CORN AVAILABLE TO SELL

(Worksheet 2)

Farm _____

Acres _____

Expected Yield _____

Operator's Share (%) _____

Operator's Share (bu) _____

Feed Requirements

Type of livestock _____

Number of units _____

Bushels corn per unit _____

Bushels needed for feed _____

Bushels Available for Sale

1. Bushels in storage to sell _____

2. Expected production, operator share _____

3. Feed requirements _____

4. Available for sale (line 1 + line 2 - line 3) _____

DETERMINING SOYBEANS AVAILABLE TO SELL

(Worksheet 2)

Farm _____
Acres _____
Expected Yield _____
Operator's Share (%) _____
Operator's Share (bu) _____

Bushels Available for Sale

1. Bushels in storage to sell _____

2. Expected production, operator share _____

3. Feed requirements _____

4. Available for sale (line 1 + line 2 - line 3) _____

FARROW-TO-FINISH WORKSHEET
(Worksheet 3)

	Economic	Cash Flow
Total adjusted variable cost per litter	$_____	$_____
Total fixed cost per litter	$_____	$_____
Total cost per litter	$_____	$_____
Weight of hogs per litter	_____	_____
Total cost per cwt. of market hogs	$_____	$_____

FIGURING CROP PRODUCTION COSTS
(Worksheet 4)

	Economic	Cash flow
Operating costs	$_____	$_____
Machinery ownership	$_____	$_____
Labor, family living, and income tax	$_____	$_____
Land and crop improvements	$_____	$_____
Total costs	$_____	$_____
divided by no. of acres	_____	_____
divided by yield/acre	_____	_____
Total cost per bushel or ton	$_____	$_____

OWNED GRAIN STORAGE COSTS
(Worksheet 5)

Handling into and out of storage	_____/bu.	$_____
Extra shrink to store		
• points of extra drying	_____pts.	$_____
• shrink factor	_____%	
• cash price at start of storage	_____/bu.	
Extra drying cost to store	_____/pt.	$_____
• variable cost per point removed		
Quality loss for on-farm storage	_____%	$_____
Interest cost on loan or savings	_____%	$_____
Income tax saving from postponing sales until after Jan. 1		
• marginal tax rate	_____%	$_____
Total cost, owned storage		$_____

RENTED GRAIN STORAGE COSTS
(Worksheet 5)

Commercial storage charge		
• base fee until _____ (date) is	_____/bu.	$_____
• monthly fee thereafter	_____/bu.	$_____
Extra shrink to store		
• points of extra drying	_____pts.	$_____
• shrink factor	_____%	
• cash price at start of storage	_____/bu.	
Extra drying cost to store	_____/pt.	$_____
• variable cost per point removed		
Interest cost on loan or savings	_____%	$_____
Income tax saving from postponing sales until after Jan. 1		
• marginal tax rate	_____%	$_____
Total cost, rented storage		$_____

CASH FLOW NEEDS
(Worksheet 6)

	Year Total	Quarter 1	2	3	4
Income before crop/livestock sales	____	____	____	____	____
Family living needs	____	____	____	____	____
Farm operating needs	____	____	____	____	____
Cash flow needs each period	____	____	____	____	____

CALCULATING A NET PRICE FOR LIVESTOCK

(Worksheet 7)

	Most Likely	Range
CASH SALE		
Month of sale	_____	
Cash price	_____	_____
FORWARD CONTRACT		
Delivery month	_____	
Contract price	_____	
HEDGE		
Contract month	_____	
Futures price when hedged	_____	
- Expected basis when lifted	_____	_____
- Commissions	_____	
= Net price	_____	_____

(Worksheet 7 continued)

OPTIONS

Contract month	_____	
Strike price	_____	
- Premium to purchase PUT	_____	
- Expected basis when PUT is sold	_____	_____
- Commissions	_____	
= Minimum net price	_____	_____
Maximum cash price	_____	
- premium	_____	
- commissions	_____	
= Maximum net price		_____

CALCULATING A NET PRICE FOR GRAIN
(Worksheet 8)

CASH SALE	Most Likely	Range
Month of sale	_____	
Cash price	_____	_____
- Storage costs	_____	
= Net price	_____	_____

FORWARD CONTRACT	
Delivery month	_____
Contract price	_____
- Storage costs	_____
= Net price	_____

PRICE-LATER CONTRACT	
Delivery month	_____
Expected cash price	_____
- Contract service charges	_____
= Net price	_____

(Worksheet 8 continued)

HEDGE

Contract month	_____	
Futures price when hedged	_____	
- Expected basis when lifted	_____	_____
- Storage cost until delivery	_____	
- Commissions	_____	
= Net price	_____	_____

OPTIONS

Contract month	_____	
Strike price	_____	
- Premium to purchase PUT	_____	
+ Premium for selling a CALL	_____	
- Expected basis when PUT is sold	_____	_____
- Storage costs until delivery	_____	
- Commissions	_____	
= Minimum net price	_____	_____
Maximum net price		_____

(Maximum cash net price - premium - storage - commissions)

NET WORTH
(Worksheet 9)

Name_____ **Date**_____

_____

Farm Assets		Farm Liabilities	
Current	_____	Current	_____
Intermediate	_____	Intermediate	_____
Long-term	_____	Long-term	_____
Total Assets	_____	Total Liabilities	_____
		Farm Net Worth	_____

Family Assets		Family Liabilities	
Current	_____	Current	_____
Intermediate	_____	Intermediate	_____
Long-term	_____	Long-term	_____
Total Assets	_____	Total Liabilities	_____
		Family Net Worth	_____

Farm and Family Net Worth _____

KEY RATIOS
(Worksheet 10)

A. NET WORTH RISK RATIO

1. Current net worth of business _____
2. Percent willing to risk _____
3. Maximum loss to risk
   (line 1 x line 2) _____
4. Quantity to sell _____
5. Net worth risk ratio
   (line 3 ÷ line 4) _____

B. CASH FLOW RISK RATIO

1. Breakeven price needed _____
2. Expected average price _____
3. Cash flow risk ratio
   (line 1 ÷ line 2) _____
4. Total quantity to sell _____
5. Excess quantity to sell
   [(100% - line 3) x line 4] _____

(Worksheet 10 continued)

C. PRICE PROTECTION RATIO

1. Quantity forward contracted _____
2. Quantity hedged _____
3. Quantity for which PUT option is owned _____
4. Total quantity with price protection (line 1 + 2 + 3) _____
5. Total quantity yet to be delivered _____
6. Price protection ratio (line 4 ÷ line 5) _____

Developing a Marketing Plan for Livestock (Worksheet 11)

Step 1. How many hundredweight do you expect to sell during the next 12 months? (Worksheet 1)

expected _____ pessimistic _____

Step 2. What is your cash flow breakeven price for the livestock you expect to sell in the next 12 months? (Worksheet 3)

expected _____ pessimistic _____

Step 3. What is the projected average cash price during the next 12 months?

_____/cwt.

Step 4. Omitted for livestock

What are the likely prices in each sales period given the typical seasonal price cycle shown on table two and the projected average price during the next 12 months?

	Yearly	1st	2nd	3rd	4th
Expected price	____	____	____	____	____
Expected Cwt. to sell	____	____	____	____	____
Expected gross sales	____	____	____	____	____

Step 5. Net cash flow before livestock and grain sales (Worksheet 6)

Yearly	1st	2nd	3rd	4th
_____	_____	_____	_____	_____

Net cash flow before grain sales

Yearly	1st	2nd	3rd	4th
_____	_____	_____	_____	_____

Step 6. Omit for livestock plan

Step 7. What other sources of cash are available?

Step 8. What pricing tools are available? (Worksheet 7)

Step 9. How much risk protection does each pricing tool offer? (Worksheet 7)

Step 10. How much risk can you afford? (Worksheet 10)

Developing a Marketing Plan for Grain (Worksheet 12)

Step 1. How many bushels do you have available to sell? (Worksheet 2)

_____

How many new crop bushels do you expect?

_____

Step 2. What is your cash flow breakeven price after subtracting deficiency payments? (Worksheet 4)

expected yield _____ bu/acre
breakeven price _____ /bu
pessimistic yield _____ bu/acre

Step 3. What is the projected average cash price during the next 12 months?

_____ /bu.

What are the most likely average cash prices for each quarter? (see table 2)

	Season	1st	2nd	3rd	4th
Seasonal price index		____	____	____	____
Expected cash price	____	____	____	____	____
(Step 4) Storage costs		____	____	____	____
Expected net price		____	____	____	____

Step 5. Net cash flow before grain sales (Worksheet 11)

Yearly	1st	2nd	3rd	4th
_____	_____	_____	_____	_____

Step 6. Bushels that need to be sold to meet cash flow.

Yearly	1st	2nd	3rd	4th
_____	_____	_____	_____	_____

Step 7. Contingency funds (cash on hand)

Available	To be used			
	1st	2nd	3rd	4th
_____	_____	_____	_____	_____

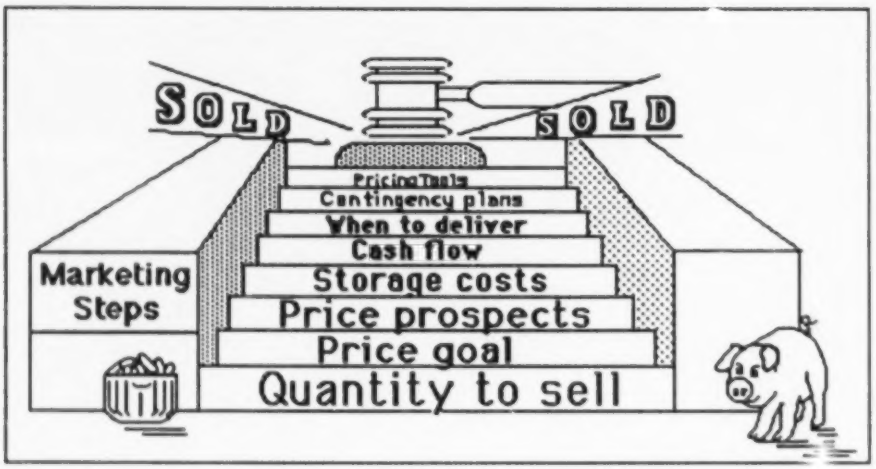
Contingency funds (Operating Credit)

Available	To be used			
	1st	2nd	3rd	4th
_____	_____	_____	_____	_____

Step 8. What pricing tools are available? (Worksheet 8)

Step 9. How much risk protection does each pricing tool offer? (Worksheet 8)

Step 10. How much risk can you afford? (Worksheet 10)



Estimate quantity of livestock or grain to sell.

Set price goals considering your breakeven costs, storage costs, and outlook for prices.

Project delivery periods considering cash flow needs.

Compare pricing tools according to net return and risks.

Based on your solvency and liquidity positions, assess your risk-bearing ability.

Complete your own market plan.